This Week's News

WE AMERICANS consumed 327,932,000 barrels of gasoline last year, 10.48 per cent more than we consumed in 1927.

We shipped 53,797,000 barrels of gasoline to other countries or 21.33 per cent more than we exported in 1927.

To meet this demand and overcome a decline in the small volume of imports, our refineries stepped up their production 14.14 per cent and produced a little more than 37½ barrels of gasoline for every barrel of crude oil run to stills.

Our refiners did their work well. They balanced gasoline production so well to market demand that stocks of finished gasoline were reduced by 250,000 barrels over the year, just about six hours' supply on an average summer day.

Turn to page 104 of this issue of NATIONAL PETROLEUM NEWS where you'll find the data for 1928 on all divisions of our industry.

NATIONAL PETROLEUM NEWS

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The Week's News

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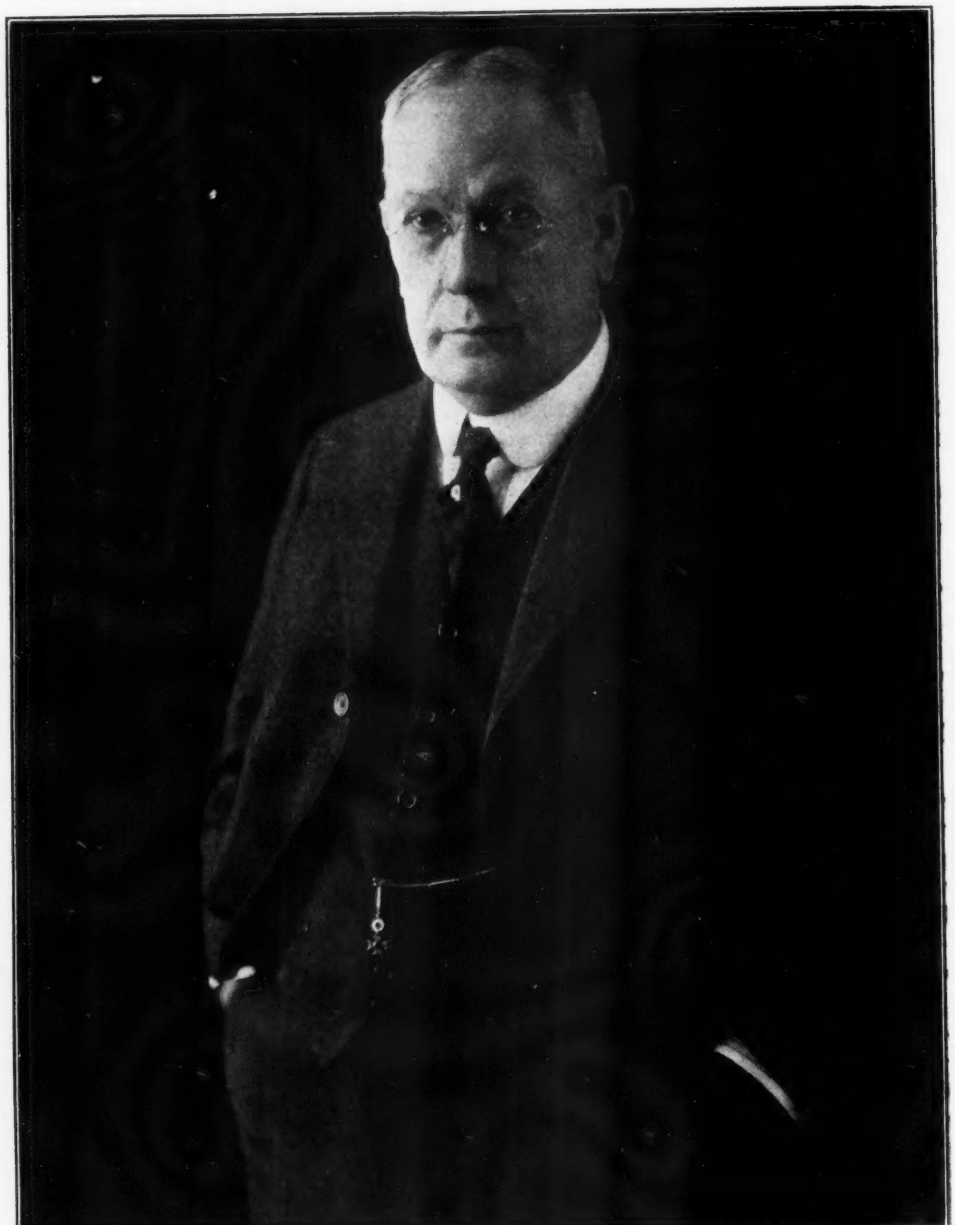


—Photo by Blank-Stotter, Inc.

GEORGE STEWART DAVISON, president of the Gulf Refining Co., is one of the comparatively few high executives in the oil business who has an engineer's training. He was a civil engineer before entering the Gulf organization.

The Gulf Refining Co., under Mr. Davison's guidance was one of the big companies early to recognize the important part engineers and technologists were to play in all branches of the business.

Mr. Davison has been president of the American Society of Civil Engineers and on June 9, 1926, the University of Pittsburgh conferred on him the honorary degree of Bachelor of Science.

NATIONAL PETROLEUM NEWS

Trade Practice Conference Adopts A. P. I. Code of Ethics

By Roger B. Stafford
N. P. N. STAFF WRITER

By telegraph
ST. LOUIS, Feb. 12

OUR industry's trade practice conference held here today, under the supervision of the Federal Trade Commission, adopted with only a few changes the code of marketing practices which was approved at the Chicago convention of the American Petroleum Institute in December.

The code will now be scrutinized by the Federal Trade Commission and when approved by it will be promulgated as the decalog of the marketing division. It will be several weeks, perhaps several months, before it comes from the commission's offices in Washington.

Only two of the suggested rules in the institute's proposal as adopted at the Chicago convention, provoked extensive arguments today. These rules were those about the loaning or leasing of equipment and discounts to commercial accounts.

The arguments about commercial account discounts revolved about two points, one being the definition of such an account and the other being whether commercial consumers should receive discounts for gasoline deliveries through service stations.

The definition adopted at Chicago was amplified so as to exclude motor vehicles other than trucks and busses from receiving discounts under commercial account contracts, but the rule pertaining to discounts at service stations was retained as approved at Chicago only after a motion to strike it out was lost by a standing vote of 65 to 58. The count indicated that 197 of the 298 oil men who were registered at the conference, did not vote.

After the lengthiest debate of the seven-hour conference rule 1, pertaining to the loaning and leasing of equipment, was adopted as approved at Chicago without the replacement of a comma.

Rule 2, was amplified so that all dealers may exchange or substitute equipment on locations where gasoline, kerosene or lubricating oils are sold on the date the commission approves the code without requiring a deposit of $100 to cover installation costs and that such exemption shall not extend to only the original lenders. Evidently the conference meant jobbers, distributors or wholesalers instead of dealers in view of the definition of a dealer in the sixth general classification of the code.

The conference struck out the second sentence of Rule 14, which would have prohibited any marketing company from selling or delivering to any dealer, distributor or commercial account where such sale or delivery would violate an existing written contract with another marketing company. Edgar B. McCulloch, chairman of the commission who presided at the conference, said this provision went "pretty far" toward restricting trade.

RULE 19 also was stricken out when W. R. Boyd, Jr., executive director of the American Petroleum Institute, said the United States Department of Justice had said the proposal was clearly a violation of the Sherman anti-trust law. The obstacle in this proposal was this sentence: "No refiner, distributor, jobber or wholesaler shall knowingly sell to any distributor, jobber, wholesaler or dealer who knowingly violates any of the provisions of this code."

In Rule 20 of the code as adopted the word "lawful" was inserted to define the steps a marketing company may take to meet the competition that violates the code.

There were only a few dissenting voices raised in the vote on Rule 1 after the long debate. After amendment Rule 2 was unanimously approved. Rules 3 to 8 inclusive, were unanimously adopted although Rule 8, pertaining to the leasing and subleasing of stations and station sites as a means of price cutting brought forth some discussion about the necessity of proving a motive, and whether the rule would preclude lowering the rental on a station or site when its value as a station or station site has depreciated.

AN AMENDMENT permitting such reduction of rentals because of depreciation introduced by Hubert B. Fuller, Cleveland, in behalf of the Ohio Petroleum Marketers Association, was voted down as unnecessary. R. C. Holmes, president of The Texas Corp., said it would be impossible to sublease some sites for service stations on their real estate values which were greatly in excess of the service station site values of the properties.

Chairman McCulloch was apprehensive about Rule 9 lest the posting of prices at the places of delivery might be construed to mean an exchange of present prices such as is forbidden under the anti-trust laws as interpreted by the United States Supreme Court in the hardwood lumber decision.

Roy B. Jones, chairman of the institute's general code committee and the institute's whip on the floor of the conference differed about this interpretation and finally carried his point. Objection to holding to the posted prices was voiced by a representative of Illinois cooperative oil companies who also sought an interpretation of what was a rebate and whether his companies' distribution of profits on a gallonage or patronage basis constituted rebating. A broad construction was put on the

rule that the cooperative dividends were dividends and not rebates.

Louis A. Spies, an attorney of Washington and director of the Washington Petroleum Co., offered an amendment to eliminate commercial discounts from service station deliveries but lost. He cited as an example that this elimination could be accomplished by the "largest oil company in the United States."

Rules 10 to 13 inclusive, were adopted without debate although Chairman McCulloch pondered a few minutes over Rule 12, pertaining to the extension of credit. Rule 14, as amended and Rules 15, 17 and 18 also were adopted unanimously. The Phillips Petroleum Co. expressed opposition to Rule 16, pertaining to gifts on opening days of stations, but did not vote against it. Rule 21, was introduced by Paul E. Hadlick, secretary and counsel of the marketers associations in Minnesota and North Dakota, as a result of a new policy of the trade commission.

The first four definitions contained in the last general department of the code were adopted without discussion but the fifth definition was revised after considerable debate and the offer of several amendments.

In opening the conference, Chairman McCulloch explained the method in which the conference was called and said that any opinions he might give were his own opinions and should not be construed as those of the commission, his vote on any proposal being only one of five on the commission. He said the commission would not attempt to force on our industry any resolutions it did not want, but if any resolution was not according to law the commission might modify it. He said, however, that the commission's interest primarily was to safeguard the public.

HE SAID the commission had no power to enforce the resolutions which our industry might adopt as good business practices but that violations by those persons or companies that subscribed to the resolutions would be considered a fraud and would be prosecuted if violations were committed secretly.

"When there's a breaking of your mutual rule, you must do it openly," he added.

Mr. Boyd outlined the history of the development of the institute's code and moved that the code as adopted at Chicago be adopted by the conference. Chairman McCulloch ruled that the American Petroleum Institute code should be taken up section by section.

Mr. Boyd said that 95 to 97 per cent of the refining capacity of the United States and 90 per cent of the volume of distribution was represented by the men present at the conference.

When the conference got down to consideration of the code following the election of Mr. Hadlick as secretary and other preliminaries, J. C. Adams, counsel for the Transcontinental Oil Co., Tulsa, submitted a series of substitute rules for Rule 1, pertaining to leasing and loaning of equipment. The Transcontinental substitute would have made the rules more rigid, but according to Mr. Adams, would have prevented the freezing of dealer accounts with holders the date the commission promulgates the code.

Mr. Adams contended that inadequate time had been given consideration of the code at Chicago, thus shutting out the views of thousands of persons engaged in marketing and that the code had come of the Chicago meeting a compromise of conflicting ideas.

Mr. Jones admitted the code was a compromise but insisted that compromises were necessary to make the code practicable.

Many of the representatives of the state marketer's associations expressed approval of the code as a whole. These associations included those of Wisconsin, Tennessee, Ohio, Missouri, Illinois, Pennsylvania, Oklahoma, North Dakota, Minnesota, North Carolina, Arkansas, Iowa and Michigan.

The only expression in regard to calling in an outside agency to police the marketing of petroleum products came when Mr. Fuller presented a condemnation of loaning of equipment by the directors of the Ohio association.

"This should be a code of ethics and not one of expediency," said Mr. Fuller.

We should not call in a policing body but should observe the code for the glory of its principles. The remark was met with applause but no further comment.

The 298 representatives were divided as follows: producers 4; producers and refiners 3; producers, refiners and marketers 97; refiners and marketers 7; jobbers 63; jobbers proxies 66; jobbers associations 20; refiners associations 3; producers association 1; natural gasoline association 1; American Petroleum Institute 2; and not classified 31.

Prosperity in 1929 Depends On Output Restriction

(By Telegraph)

HOUSTON, Feb. 11

WHATEVER measure of prosperity comes to the petroleum industry in 1929 must result from cooperation to prevent the bringing of unnecessary production above ground and the unnecessary manufacture of unneeded quantities of gasoline, according to President W. S. Farish of the Humble Oil & Refining Co.

His annual statement read in his absence by Vice President R. L. Blaffer at the Humble's meeting of stockholders in Houston, February 11, gave credit for 1928 profits to the conservatism exhibited by the refining branch of the industry in not over manufacturing the year's markets. Continuing the statement by Mr. Farish said: "probably the chief reason for the refiners attitude and the chief reason the industry maintained the equilibrium it did between supply and consumption was the proration carried on with the help of the railroad commission of Texas which enabled the producers to have some check on flush production. Even so in Texas there was added 20,000,000 barrels to the oil in storage in 1928.

"As we review the conditions and attempt to analyze the prospect for 1929 we are frankly at a loss to weigh accurately the difficulties and intelligently interpret the future. As we view it no situation could be more complicated than the one we face this year.

"Frankly the industry is in position at will to overproduce crude in practically every important area in the United States; the refining industry is equipped to overproduce gasoline in every important area in the United States. Fuel oil is selling at prices which we think are entirely too low to represent the intrinsic value of the commodity. Oil is being pushed into uneconomic uses in increasing quantities."

Mr. Farish then referred to cooperation considered necessary to permit whatever measure of prosperity may result. His statement gave Humble Co. net profits for 1928 as $18,924,360.87, as compared with $7,115,124.58 in 1927.

To Bond Jobbers

CLEVELAND, Feb. 8.—Every jobber in Missouri would be required to post a $10,000 bond by House Bill No. 180 now being considered by the Missouri legislature. The bond would be to assure the state that gasoline tax payments would be made. The proposed law is being opposed actively by the Missouri Oil Men's Association under the leadership of George S. Allee, president.

A.P.I. Will Work for Laws Permitting Cooperation in Oil Production

By Lawrence E. Smith
N. P. N. STAFF WRITER

(By Telegraph)
ST. LOUIS, Feb. 12

THE American Petroleum Institute for the past two years has been like a timorous bather testing the temperature of legislative water with a tentative toe.

On Monday it dived off the dock. By resolution the institute is pledged to work for passage of state laws to permit agreements among operators for cooperative development of single pools and the reposing of authority in some state board or commission to carry out programs of cooperative development and production.

Passage of this resolution came late Monday night after a session of many hours and several informal caucuses held Sunday and Monday. Of the 62 directors of the institute, half were present and of these 31, approval of the resolution was voted by 28 with two voting against the resolution and one passing his vote.

While the resolution does not specifically endorse the bills recently drawn by a committee of the American Bar Association, which have been widely discussed in the industry, it generally follows the principles set out in those bills.

It stresses the control of gas energy as an essential to proper conduct of the producing industry and it proposes legislation that will confer upon some public authority the right to make and enforce orders affecting gas control, proration and cooperative development of single pools.

It does not mention the principle of majority rule of producers setting up cooperative development plans, which is one of the chief features of the bar association bills.

"This has been a glorious day for the industry," said President E. B. Reeser along toward midnight. "The adoption of the code of marketing practices and now the agreement upon a constructive and workable way of stabilizing the producing industry have made this an epochal occasion."

Mr. Reeser said that he would appoint a committee to plan methods of getting legislative proposals before state legislatures. Opinion was general among the directors that the season is too far advanced to get anything done this year but the plans will be made for any special sessions, such as in Texas where it is believed an extraordinary session will be held.

In view of the delay of getting the type of state laws desired, a resolution was introduced by William N. Davis, vice president of the Phillips Petroleum Co., pledging the directors to cooperate in their capacities as executives of companies producing oil where overproduction is imminent to use "their full powers through all legal cooperative methods to prevent the development of such overproduction with its attendant waste." This was adopted unanimously.

The vote for the legislative resolution was as follows: E. B. Reeser, Barnsdall Corp.; H. M. Dawes, Pure Oil Co.; H. F. Sinclair, Sinclair Consolidated Oil Corp.; Frank Phillips, Phillips Petroleum Co.; W. G. Skelly, Skelly Oil Co.; W. S. Fitzpatrick, Prairie Oil & Gas Co.; W. C. Franklin, Tidal Oil Co.; J. F. O'Donohoe, president Texas division of the Mid-Continent Oil & Gas Association; Axtell J. Byles, Tidewater companies; John L. Gray, Shaffer Oil & Refining Co.; W. S. Farish, Humble Oil & Refining Co.; Wallace Pratt of the Humble, representing the American Association of Petroleum Geologists; William N. Davis, president of the Mid-Continent Oil and Gas Association; M. Lombardi, Standard Oil Co. of California; L. P. St. Clair, Union Oil Co. of California; A. L. Guiberson, Los Angeles; Walter C. Teagle, Standard Oil Co. of New Jersey; E. T. Wilson, Continental Oil Co.; Clark Kountz, Prairie Pipe Line Co.; Roy B. Jones, Panhandle Refining Co.; W. M. Irish, Atlantic Refining Co.; H. B. Earhart, White Star Refining Co.; H. V. Foster, Indian Territory Illuminating Oil Co.; P. M. Miskell, Empire Oil and Refining Co.; L. V. Nicholas, Chicago; George P. Whaley, Vacuum Oil Co.; L. J. Drake, Union Tank Car Co.; J. S. Carroll, Johns-Manville Co. The two who voted in opposition were George P. Davison, Gulf Oil Corp., and E. R. Brown, Magnolia Petroleum Co. R. C. Holmes of The Texas Corp., passed his vote.

The text of the resolution on legislation is as follows:

"Whereas, the committee appointed by the president of this institute to study and determine the conditions existing in the oil industry finds that there is an imminent overproduction of oil which if not regulated threatens to become acute and to result in the flow of oil into unnatural channels of consumption to the disadvantage of the industry and in the use for inferior purposes of this most valuable, limited and irreplaceable natural resource to the serious injury of the public and, whereas this overproduction of oil is due to present competitive methods of producing oil which result also in great physical waste of both oil and gas through the failure among other things to recognize and observe the principle that the prevention of the waste of natural gas found in oil producing formations is of paramount importance in connection with the economical production and conservation of oil and whereas the waste of gas cannot be prevented in an oil pool where there is diversified ownership, so long as any one operator, through ignorance of the above principle, or through selfish disregard for the correlative rights of his neighbors or through desire to capture more oil than underlies his property, disregards the above principle and continues physically to waste gas and oil and refuses to cooperate with his neighbors in accepting preventive measures.

"Now, therefore, be it resolved, that we the board of directors of the American Petroleum Institute, favor the enactment of laws to prevent the waste of such gas by the various oil producing states in which natural gas is being unnecessarily wasted. Be it further resolved, that we favor the enactment of laws in the various oil producing states that will permit agreements between the operators in a single pool for the orderly development of oil and gas holdings therein, and the enactment of laws vesting in some public authority the power to prevent not only such unnecessary waste of gas, but also to prevent the continuance of drilling and producing practices which result in underground physical waste of oil or gas, including the power to make and enforce orders prorating the production of oil in a pool between the several leases therein and establishing and carrying out a program for the orderly development of a pool through the orderly development by each operator of his separate holdings therein;

"Be it further resolved, that the president be and he is hereby authorized to appoint such committees and take such steps as may be necessary to cooperate fully with other agencies in the accomplishment of these purposes and that he be instructed to file a copy of this resolution with the Federal Oil Conservation Board."

Disputed Provisions Cut From New Conservation Law

By Telegraph

HOUSTON, Feb. 12

ALL disputed provisions of the new oil and gas conservation law proposed to the present legislature had been eliminated in a substitute bill reported on favorably by the house oil, gas and mining committee in executive session the night of February 11. The bill now goes to the floor of the house for whatever future action may be taken.

The substitute measure, introduced by Representative J. R. Long of Wichita Falls, had deleted entire sections from the original bill, making the following changes among others:

Elimination of the entire article 6029, which included clauses solidifying the commission's power to prorate crude oil production and establish machinery for the fixing of oil/gas ratios in producing practice.

Elimination from the provision defining waste of oil of the railroad commission's authority to require well spacing, drilling practices, and so forth, to prevent unnecessary waste of gas.

Elimination of a well plugging provision under which landowners obtained a lien when plugging was done at the direction of the commission after failure of the driller to plug.

Elimination of a requirement to hold oil and gas in the original stratum until it can be produced and utilized without waste.

Elimination of a tax of one-twentieth of the market value of crude oil to furnish revenue for the commission's enforcement of regulations.

Elimination of a provision requiring a certificate from the commission that its regulations had been complied with before allowing connection of a well with pipeline.

Elimination of a provision placing venue in Travis county in suits filed to exact penalty, and placing venue in county where violation took place.

Elimination of provision requiring a company to file with commission a statement of names of trustees, officers, directors, members of partnership, and so forth, before drilling may be started.

Amendments to the substitute bill were offered by Elwood Fouts, Houston attorney for a group of companies, which would reduce the penalty for violation of the act from $1000 daily to $100; also making less stringent the definitions regarding underground waste of oil and gas.

Grayberg Merger Completed

By Telegraph

HOUSTON, Feb. 11.—Negotiations under way about two months resulted in announcement at San Antonio, February 11, of the merger of Grayburg Oil Co., and the Indiana Oil & Gas Co., the last mentioned a subsidiary of the American Controlled Oilfields Co. Silas M. Newton, of the Indiana Co., will become president of the Grayburg. Dr. F. L. Thompson of San Antonio, formerly its president, will become chairman of the board and treasurer.

Buys Nine Can Makers In One Year

NEW YORK, Feb. 9.—The ninth can manufacturer since the first of 1928 was purchased recently by the Continental Can Co., Inc., when it took over the Manufacturers Can Co., Harrison, N. J., and the Manhattan Can Co., Brooklyn, N. Y. Further economies to the company and better service to customers are the reasons for the acquisition of these companies. Among the tin containers made by these companies are those for oils and greases.

RICHMOND, Va.—Gasoline dealers of Lynchburg, Va. organized recently to promote good will among dealers. Frank L. Bullock was elected president and Edgar M. Shaner secretary.

Wilcox Plans Larger Capital

TULSA, Feb. 8.—Directors of the Wilcox Oil & Gas Co. have approved an increase in the capital stock from 800,000 to 2,400,000 no par shares. In October the company had 428,967 shares outstanding.

Under the recapitalization plan, it is said, two new no par shares will be issued for each outstanding no par share.

Sinclair Promotes Sales Head

BOSTON, Feb. 8.—C. A. Ham, formerly in charge of the bulk sales department at the New York office of Sinclair Refining Co., has been promoted to manager of the bulk sales department in the New England district, with headquarters at Boston. Mr. Ham succeeds E. L. Wolfe.

Index to Coming Meetings

Wisconsin Petroleum Association: Schroeder Hotel, Milwaukee, March 13 and Apr. 10; Beaumont Hotel, Green Bay, May 15.

Ohio Petroleum Marketers Association, Hotel Statler, Cleveland, O., Feb. 13, 14, 15.

Iowa Independent Oil Men's Association, Fort Des Moines Hotel, Des Moines, Ia., Feb. 19, 20.

American Institute of Mining and Metallurgical Engineers, Petroleum Division, New York City, Feb. 20 and 21.

National Oil Scouts Association of America, Texas Hotel, Fort Worth, Feb. 23.

Natural Gasoline Association of America, Plant Operators Meeting, American Legion Hall, Ranger, Tex., Feb. 26.

Illinois Petroleum Marketers Association, Pere Marquette Hotel, Peoria, Ill., Feb. 27 and 28.

Pennsylvania Independent Oil Men's Association, Penn Harris Hotel, Harrisburg, Pa., March 5, 6, 7.

Ohio Gas & Oil Men's Association, Columbus, O., March 5 and 6.

Independent Oil Men's Association of New England, American House, Boston, Mass., Mar. 6, 7, 8.

Michigan Oil Men's Association, Statler Hotel, Detroit, March 7, 8.

Western Petroleum Refiners Association, Jefferson Hotel, St. Louis, Mo., March 12.

American Association of Petroleum Geologists, Fort Worth, March 21, 22, 23.

Independent Oil Men of America, Chicago, March 25, 26.

American Petroleum Institute division of Development and Production Engineering, Texas-Louisiana-Arkansas division, Baker Hotel, Dallas, Tex., Apr. 3, 4.

Minnesota Petroleum Association, Radisson hotel, Minneapolis, Apr. 3, 4.

American Oil Burner Association, Hotel Pennsylvania, New York City, Apr. 9, 10, 11.

National Petroleum Association, Riverside Hotel, Cambridge Springs, Pa., Apr. 25, 26.

Virginia Independent Oil Men's Association, Murphy Hotel, Richmond, Va., May 15, 16.

Natural Gasoline Association of America, Mayo Hotel, Tulsa, May 20, 21, 22.

Proration of Seminole District Pools Will Be Started Feb. 14

By Lawrence E. Smith
N. P. N. STAFF WRITER

TULSA, Feb. 9

PRORATION in Oklahoma becomes effective Feb. 14.

That is, provided some who look with disfavor on the plan now change their minds. At the date of this writing, it is still uncertain whether the plan mapped out on Feb. 5 will start off in workmanlike manner on the date set. At any rate, the effect on Oklahoma's production will not be noted immediately.

A complication in the proceedings is the application of W. L. Kistler, of Tulsa, for corporation commission order shutting down the Mission pool, Seminole county, for an additional 30 days after Feb. 15. Mr. Kistler objects to prorating this pool on a percentage basis. It is due to be opened to production on Feb. 15.

He would continue to keep all wells shut in entirely, as at present, rather than prorate and would have the commission issue an order covering that and prohibiting the starting of additional wells for 30 days. The pool is now being developed under agreement to drill two wells to each 40 acres as the first crop, with Feb. 15 as the terminal date of the agreement. The corporation commission has set Feb. 15 for hearing on the Kistler petition.

So, with this and that, proration does not promise to be 100 per cent effective at the outset. More than a majority of the operators in the Seminole district, the only Oklahoma area to be affected by restriction, have pledged support to the plan. In fact, but two have asserted that they are positively opposed and a third is waiting to see what happens at the St. Louis meeting of the American Petroleum Institute directors, Feb. 11. At this date of writing, Umpire Collins had received assurance of support from 25 companies, eight were waiting to hear from executive offices in the east and 11 more had not made known their views.

Under the plan, potential production figures for each lease will be taken at 15-day intervals and a percentage applied to the fields in an amount calculated to hold the state's daily output to 650,000 barrels. That means that it will have to come down about 80,000 barrels on the basis of present figures—more when Mission is opened—to achieve the agreed-on figure.

The first potential base is being arrived at from the affidavits producers are giving the umpire showing the production for the first five days in February. The umpire will notify each operator how much he will be permitted to produce from each property for 15 days from Feb. 14. The total allowed amount will be given, not the daily figure. The operator may meet the allowed figure any way he desires. He may do it by partially restricting the production from each well, by shutting them in part time, or any way he pleases. The widest latitude is given in this regard, the only requirement being that he produce only the total assigned.

Much of the cumbersome bookkeeping employed in the proration in the summer of 1927 is thus avoided. Then, the umpire changed the allowed figures daily, keeping an "over" and "short" account on each property.

A DEFECT in the present plan, however, is that potentials will not be constant during any 15-day period. They will tend to be approximately so in the old Seminole City, Bowlegs, Searight and Little River fields, but new wells in Earlsboro, Maud, Mission and St. Louis will put them out of line. Hence, it is seen that the 650,000-barrel figure is merely a mark to shoot at and one that will not be hit. There is doubt whether the production will actually be brought below 700,000 barrels.

Tentatively, the umpire figures now on a cut of 18 per cent on the Seminole City, Earlsboro, Bowlegs, Searight and Little River pools, 20 per cent on St. Louis and 24 per cent on Maud, the latter two in Pottawatomie county. That leaves out of consideration the Mission pool and it is thus excluded from the list because of the W. L. Kistler proposal to shut it down completely. If nothing comes of that move, the percentage of proration probably will be 27 per cent on the five old fields, 30 per cent on St. Louis and 36 per cent on Maud and Mission.

Two reasons why fair degree of success should be had under this plan are given by operators who are active in promoting it. One is that pipe line companies are not eager to take more oil—some connections have been released in recent days—and that they will not stand ready to give aid and comfort to the operator who might kick over the traces.

Another reason is that the cut is deep enough that from an operating standpoint the reduction can be approximated. It is easier to reduce production 20 per cent than it is 10 on gas lift wells.

At the outset of the present proration move it was the sense of the meeting that something should be done about Kansas. New production is in sight in Sedgwick county, where about 100 operations are under way, and a respectable addition to that state's production is assured. A meeting of Kansas producers, to be held in Wichita, was tentatively set for Feb. 14. Arrangements were entrusted to A. M. Landon, of Independence, vice-president of the Oklahoma-Kansas division of the Mid-Continent Oil & Gas Association.

Phillips Pet. Co. Buys Wilhoit Stations

Staff Special

TULSA, Feb. 7.—The Phillips Petroleum Co. of Bartlesville, which entered the retail gasoline distributing business a year or more ago, has acquired all the service stations and bulk plants of the E. M. Wilhoit Oil Co. of Springfield, Mo. The company February 5 purchased 76 units, consisting of 46 service stations and 30 bulk stations located in 31 cities and towns in southwestern Missouri and southeastern Kansas. Phillips Petroleum Co. some time ago bought 44 stations from the Wilhoit company in northwestern Missouri.

Eleven of the service stations purchased Feb. 5 are located in Springfield, eight in Joplin, four in Carthage and the others are located one each in other towns. Some of the stations purchased are located in towns where the Wilhoit company has distributed petroleum products for a period of 33 years.

No radical change in the operation and management of the properties was contemplated at the present time, according to Phillips officials. The refinery owned by the Wilhoit interests was not included in the transaction.

Anti-Knock Testing Engine Agreed On By Committee on Detonation

THE first step toward establishing uniform methods of testing anti-knock value of motor fuels, that is, agreement on a standard engine for the purpose, has been taken. This was brought out at an open meeting in Detroit, Jan. 15, under the auspices of the Subcommittee on Methods of Measuring Detonation of the Cooperative Fuel Research Steering Committee.

The American Petroleum Institute, the National Automobile Chamber of Commerce and the Society of Automotive Engineers are represented on the subcommittee. T. A. Boyd, chief of the fuel section of General Motors Research Corp. is chairman. The other members are: Graham Edgar, chemical director, Ethyl Gasoline Corp.; J. B. Hill, chief chemist, Atlantic Refining Co.; D. P. Barnard, technologist, Standard Oil Co. of Indiana; Harry F. Horning, Waukesha Motor Co.; H. C. Dickinson, Bureau of Standards; H. K. Cummings, Bureau of Standards and Neil MacCoull, The Texas Co.

The committee was appointed in February, last year, and has held five meetings at which every member attended. Mr. Boyd outlined the work of the committee so far as follows, according to the S.A.E. Journal.

At the meeting of this subcommittee the problem of rating fuels for knock has been discussed in all its phases; and, as a result of these discussions, two significant things stand out. The first of these is that all members of the subcommittee either were or came into agreement on many of the essential points. The second is that there are certain definite problems in connection with the measurement of knock that need further investigation.

Briefly, some of the things that members of the subcommittee are in agreement on are that

(1) Measurements of knock should be made directly in an engine, and the cylinder dimensions of the engine used should approximate the average of those employed in practice.

(2) The engine should be cheap to build, should have minimum wear and long life, and should be simple enough to be fool-proof.

(3) The engine should have evaporative cooling. The main reason for this is that evaporative cooling assures a definite operating temperature, without complication or special means of control. Several laboratories already are using evaporative cooling, and without exception have found it to be beneficial.

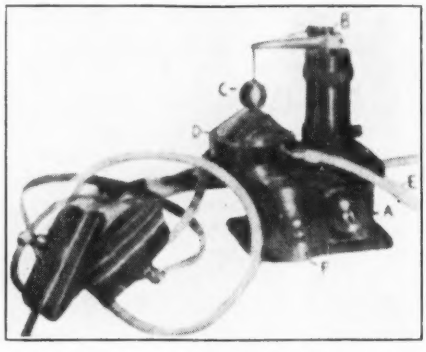


FIG. 2—LISTENING-POST INDICATOR Shaft *A*, Driven from a Dynamometer at One-Half Engine-Speed, Carries Internally a Single Adjustable Cam Which, Through the Plunger, *B*, Raises the Ball, *C*, Once in Each Revolution of Shaft *A*. From the Highest Point in the Stroke of the Plunger, the Ball Is Permitted To Drop Freely on the Diaphragm Carried by the Sound-Box *D*, to Which One Branch, *E*, of the Stethoscope Tube Is Attached, the Other Branch Being Similarly Connected To an Identical Sound-Box, *G*, on Fig. 12. The Intensity of the Click of the Dropping Ball on the Diaphragm Is Controlled by the Micrometer Adjusting-Dial, *F*, by Which the Length of the Stroke of the Plunger *B* is Controlled. Intensity of the Click Resulting from the Impact of the Ball Dropped from Varying Heights upon the Steel Diaphragm Can Be Matched Perfectly, by the Use of the Stethoscope, with the Clicks Due to Detonation Picked up by the "Audio" Diaphragm in the Listening Post of the Engine

(4) Knock tests should be made at low speeds, not greater than 1000 r.p.m. The main reasons for this are: engine quietness, avoidance of hot spark-plugs and exhaust-valves, minimum wear on the engine, and better performance of instruments used.

(5) Determinations should be made with the mixture ratio set for maximum knock.

Some of the questions that can only be decided in an adequate way on the basis of the results of further research are

(1) Just what type of induction system and fuel-metering device shall be used? These must depend to some extent upon the procedure adopted.

(2) What shall the instrumentation be?

(3) What shall the reference standard or scale be?

The committee is able to report that distinct progress has already been made on this program. The first objective, that of designing and building a suitable engine to serve as the nucleus of a knock-testing outfit, has been accomplished. The effort has been to devise an engine that can serve as a basis of application of all the various representative types of method which might be used for knock testing.

The present plan is to make up a limited number of the engines first, for proving the suitability of the design by means of a series of tests participated in by all members of the Subcommittee. For two reasons it seems best for the present to confine the use of these engines to the subcommittee.

The first is that the engine still has to be proved as to suitability before more than a limited number of them are built. The second is that the Cooperative Fuel Research Steering Committee, of which this group is a subcommittee, has authorized the building of only 10 of these engines for the present. Hence the subcommittee must arrange its activities so as to report results back to the main committee for consideration and approval before definite steps are taken in any direction.

The designing and building of the engine have been supervised by H. L. Horning, assisted by A. W. Pope, and, although Mr. Horning is one of the busiest men in the automotive industry, he has generously contributed an unlimited amount of his time and his valuable knowledge of engines to the task of designing and building this engine.

The engine to which Mr. Boyd referred, and which is shown in Fig. 1, was on exhibition at the meeting and Mr. Pope was called upon to give a description of its details, which he did as follows:

This fuel-knock testing engine is the outcome of suggestions received from all members of the subcommittee and others who have had experience in the knock testing of fuels. It differs from conventional design in many respects. The bore and stroke are 3¼ x 4½, respectively. Provision is made on the engine for the adoption of any of the equipment which has been found necessary in fuel-knock testing. This includes a built-in spark-position indicator; a tachometer driveshaft, for laboratories which do not have a dynamometer tachometer; an electric oil heater and a three-heat switch to bring the oil up to equilibrium tem-

perature quickly; an extension on the front of the crankshaft suitable for an indicator drive; an ignition-breaker drive free from excessive backlash; an opening into the combustion chamber suitable for indicator connections; a vapor cooling system to maintain a uniform jacket temperature without attention from the operator; and, finally, a steam-jacketed manifold.

The crankcase is made with a flat self-supporting base so that no blocking or substructure is required to make an engine installation. The piston is usually long and heavy and is equipped with six ⅛-inch rings, all above the full-floating wristpin. The crankshaft and connecting rod bearings are case hardened. This is accomplished without difficulty by using a built-up crankshaft. The shaft is shrunk into the cheeks and the crankpin is clamped with bolts. The hardened shaft floats in bronze bushings, which in turn float in hardened bearings.

The connecting rod big-end is not split, but is in one piece, hardened and internally ground, and carries a floating bronze bushing between it and the hardened crankpin. This floating bushing type of bearing on the crankshaft and connecting rod was selected because it was believed to have much longer life than plain bearings and that it probably will be quieter than roller or ball-type bearings.

Lubrication is by direct pressure to all rotating bearings and through a drilled connecting rod to the wristpin. In addition to the pressure system, the engine is supplied with splash lubrication from a dip trough.

To have the engine suitable for all methods of knock testing, it was necessary to have a variable-compression cylinder. The engine has been arranged so that either a fixed compression L-head cylinder or an overhead valve variable compression cylinder can be installed without disturbing in any way the crankcase assembly below the cylinder parting line.

Comments, suggestions and criticisms on both the engine and the proposed program were solicited from those in attendance at the meeting, and Chairman Boyd also urged that anyone who has employed a method of measuring knock which differs from the more common and well-known methods submit a description to be included for consideration in the comparative tests.

During the informal discussion that followed, representatives of a number of laboratories described their methods of knock testing and frankly told of the limitations and difficulties encountered. A difference of opinion developed in a discussion of the relative merits of road tests and laboratory tests.

J. P. Stewart, of the Vacuum Oil Co., stressed the point that laboratory results are often reversed in road tests; and J. R. Wright, of the Standard Oil Development Co., quoted from his experience to support the accuracy of car operators in rating fuels on the road. J. A. Edwards, of the Marland Refining Co., however, reported very inaccurate results on road tests; and Neal MacCoull, of The Texas Co., in stating his objection to such tests, brought out the technical point that the difference in the distribution systems in cars introduces a number of complications.

All agreed, however, that there is a crying need for a standard for rating fuels which may be written into Government specifications. This need has been increasingly felt with the development and wider use of aircraft owing to the fact that aircraft engines will not run satisfactorily on the ordinary domestic gasoline which contains no dope.

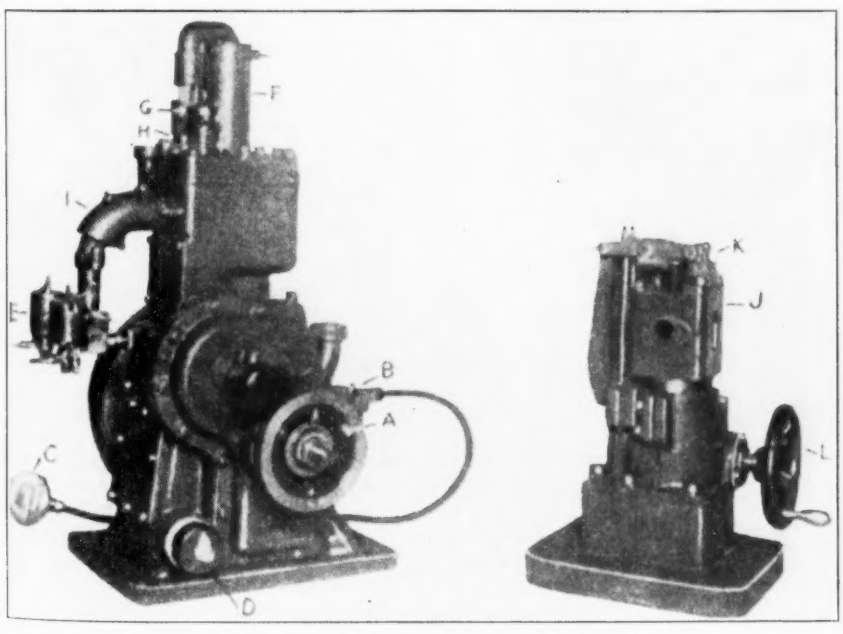


FIG. 1—EXPERIMENTAL KNOCK-TESTING ENGINE
A, Spark-Position Indicator; *B*, S.A.E. Tachometer Drive; *C*, Tachometer Head; *D*, Three-Heat Switch; *E*, Two-Fuel Double-Float-Bowl, Single-Jet Carburetor; *F*, Vapor Cooling-System; *G*, Diaphragm-Carrying Sound-Box of Listening Post; *H*, Listening Post; *I*, Steam-Jacketed Manifold; *J*, Variable-Compression Cylinder; *K*, Overhead Valves; *L*, Compression-Adjusting Mechanism

Johnson Oil Expands Into Wisconsin

FREEPORT, Ill., Feb. 12.—Acquisition in January of all marketing properties of the Stoughton High Test Oil Co., Stoughton, Wis., by the Johnson High Test Oil Co., compounder and jobber here, places that company among the leading Independent oil jobbing companies in the central middle west.

Included in the purchase were one bulk and five new service stations of the Stoughton company in Stoughton, Evansville, Oregon and Cambridge, Wis., in addition to the warehouse and office building in Stoughton, real estate and other equipment. It also added 50 new distributors for the Johnson company. Consideration was $100,000.

The Johnson company operates six service stations and a bulk plant at Freeport; also bulk and service station at Lanark, Ill., which it took over from the Sites Independent Oil Co. in the past year. It also has a bulk and service station at Forreston, Ill., and a bulk plant at Winslow, Ill. It sells Jonsunite gasoline and Hi-Duty motor oil, as well as other petroleum products.

H. W. Johnson organized the company bearing his name in 1920. He has been its president and general manager since that time.

Other officers are: A. J. Clarity, chairman of the board; L. H. Matter, vice president; R. T. Luney, secretary; and G. X. Cannon, treasurer.

Shell Pays $2,154,000 for Fall River Plant

NEW YORK, Feb. 9.—E. C. Storrow, representative of the first mortgage protective committee of the New England Oil Refining Co., has acquired the Fall River refinery of the New England company including the New Bedford terminal for $2,154,000.

The properties will be transferred to the Shell Eastern Petroleum Products, Inc., which recently acquired the marketing properties of the New England company.

Cheaper Lifting and Better Recovery Sought in Repressuring Program

By John Power
N. P. N. STAFF WRITER

CHEAPER per barrel cost of producing oil.

Greater daily production of crude.

Greater ultimate recovery of oil from the field.

These are the three objectives of the big repressuring project which is being planned for the Rainbow Bend pool in Cowley county, Kansas. The pool lies in Twp. 33S-3E. This will be the largest single repressuring enterprise for wells of that depth in the Mid-Continent.

With the wells fast reaching their economic limit under the present method of pump and clean-out, it is plainly indicated to the operators that some method must be resorted to whereby the daily production can be increased at a small cost per barrel, and if possible, one which will increase the ultimate recovery from the field.

The production history of the field indicates that but a small portion of the recoverable oil has been taken out, while the physical characteristics are such as to point to repressuring as the best method to get the desired results.

As a repressuring possibility, the field proper is ideal in many respects. In the first place, there is a remarkable unity of ownership, but three companies being interested in the main field, and of these three, one, Barnsdall Oil Co., is doing the operating. With few exceptions, all properties in the field are owned on a basis of Barnsdall Oil Co., a half interest, Marland Production Co. and Independent Oil & Gas Co. a quarter interest each. This unusual set-up automatically does away with the conflicting competitive interests which ordinarily complicate a repressuring project of any size. Second on the list of reasons for believing the field an excellent subject for repressuring is the sand body, which has an average thickness of about 30 feet, and which is fairly porous throughout.

The less porous parts of the sand are down structure, where they will actually serve as a barrier against the waste of the repressuring agent. There are some hard, tight packed streaks in the oil sand itself in parts of the field, but they are fairly continuous from well to well.

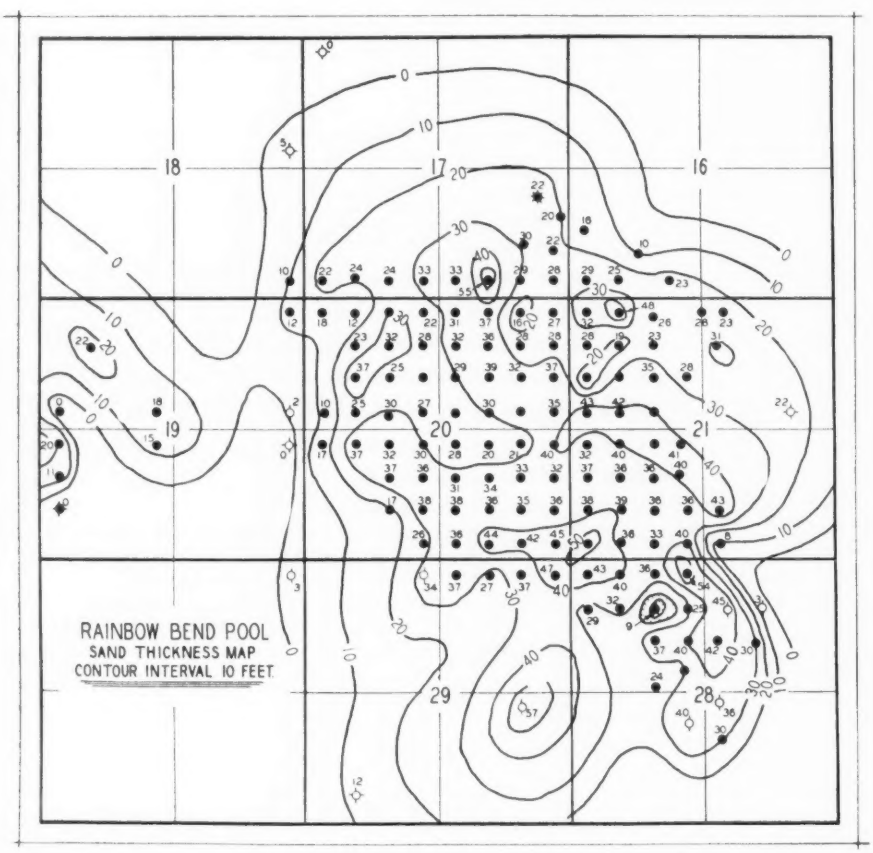
Third, there is a negligible amount of water in the sand, none at all being found in some of the wells on the higher parts of the structure, which have been drilled clear through the sand and into a chat beneath. Such water as is present is mostly confined to the less porous parts of the sand down-structure, where it will serve as an additional barrier against wasted energy in the repressuring agent.

During the early life of the field, which was discovered in December, 1923, less attention was paid to the conservation of gas and the oil moving energy in the gas than is the case today. The wells were drilled in and allowed to flow wide open, a practice which naturally depleted the gas resources of the field at a very rapid rate.

Since 1926, vacuum has been further depleting the sand of its gas. When the repressuring work gets under way, the use of vacuum will be discontinued, even at the expense of the gasoline plant. A gasoline plant in the field, operated by the Barnsdall Oil Co. is processing about 2,300,000 cubic feet of gas per day, from which it is recovering about 8000 gallons of gasoline. The residue is returned for use as fuel in the plant, field engines and camp.

Of the 114 wells now producing over an area of about 1132 acres, about 100 of them are being pumped from central powers, the remainder on the beam. Five pulling crews and from one to seven strings of clean-out tools are kept busy, clean-out time being from 30 to 45 days, running daylights. All of the wells have been shot, some of them many times, and sand caving into the shot hole is a frequent source of pumping trouble.

The restoration of pressure is not going to be any easy task, according to the engineers in charge of the work. Confining the repressuring agent to the oil sand is expected to be one of the major problems of the



The contours of the sand thickness map pictured above, and the contours of the structure map, are almost parallel. The sand is interstratified by many thin breaks of varying extent

undertaking. All of the wells logged a shale break between a gas sand on top of the oil and the oil sand. None of the casing now in the wells was cemented when run, so that it may prove practicable to underream the oil string, which is 5⅛-inch, and lower it to the shale break.

It was in nearly all cases set on top of the sand body. There is no water back of the oil string, as all water was shut off behind the 6⅝-inch, run at about 2900 feet. After being lowered, the 5-inch will probably have to be cemented, as it is considered doubtful if the ordinary seat in the shale would hold the repressuring agent at the required pressures.

Considerable experimental work must be done to determine the proper conditioning of the pressure wells. To begin with, at least, the scarcity of gas will compel the use of air as a repressure agent. It must be determined by experimentation what the injection pressure should be, the number and location of pressure wells, and the tendencies of any wells to by-pass the repressuring agent.

The latter can be determined by a close analysis of the air-gas ratios in wells adjacent to the pressure wells. Portable compressors and bottom-hole pressure gages will be used during the early stages of the work.

There is another point in which this area seems to be ideal as a place to repressure. There will be comparatively little material needed for the project which must be purchased. There are idle machines in the Barnsdall gasoline plant which can, at small cost, be converted to repressuring purposes.

As now planned, the field distribution system will probably consist of a main loop 5⅛-inch, 17-pound casing with branch lines of 2-inch, 1800-pound test line pipe to the various pressure wells. It is also likely that some changes in the lease tankage will be necessary in order to keep as close watch on individual well performance as it is thought will be necessary.

The structural and sand conditions of Rainbow Bend are almost identical with those of the Burbank pool. The structure consists of a monoclinal nosed terrace, whose axis is from northwest to southeast. The subsurface contours on a structure map are almost parallel with the contours of a sand thickness map. Production figures show that the thinner sand areas, up-structure, were more porous and permeable than the thicker areas down-structure. The sand is very similar to the Hickman and Bartlesville sands, though sometimes known locally as the Rainbow sand. Such water as is present does cause considerable trouble, as it deposits a "gyp" on the face of the sand, which clogs it and tends to hinder the migration of the oil. This gyp is a composite of salt, fine sand and paraffin.

The field reached its peak production in the spring of 1925. It had a very rapid production decline, the gas production decline being similar but even more rapid. The cumulative gas-oil production figures show that about nine times as much gas has been produced as is soluble in a barrel of oil at the 1200 pounds rock-pressure in effect when the pool was opened.

Shooting was resorted to in an effort to stay the production decline, but without any lasting effects other than to cause a lot of sand troubles in the course of ordinary pumping. Repressuring is expected to increase the caving sand troubles, for a time, at least, as it is expected that sand will be apt to slough into the shot hole as a result of changing conditions underground.

As significant of the results which may be expected from repressuring, and the difficulties which may be encountered, a study of the production figures shows that both initial productions and yield per acre are spotted in their spread over the field, but that as a whole, the high initial productions correspond with a high recovery per acre.

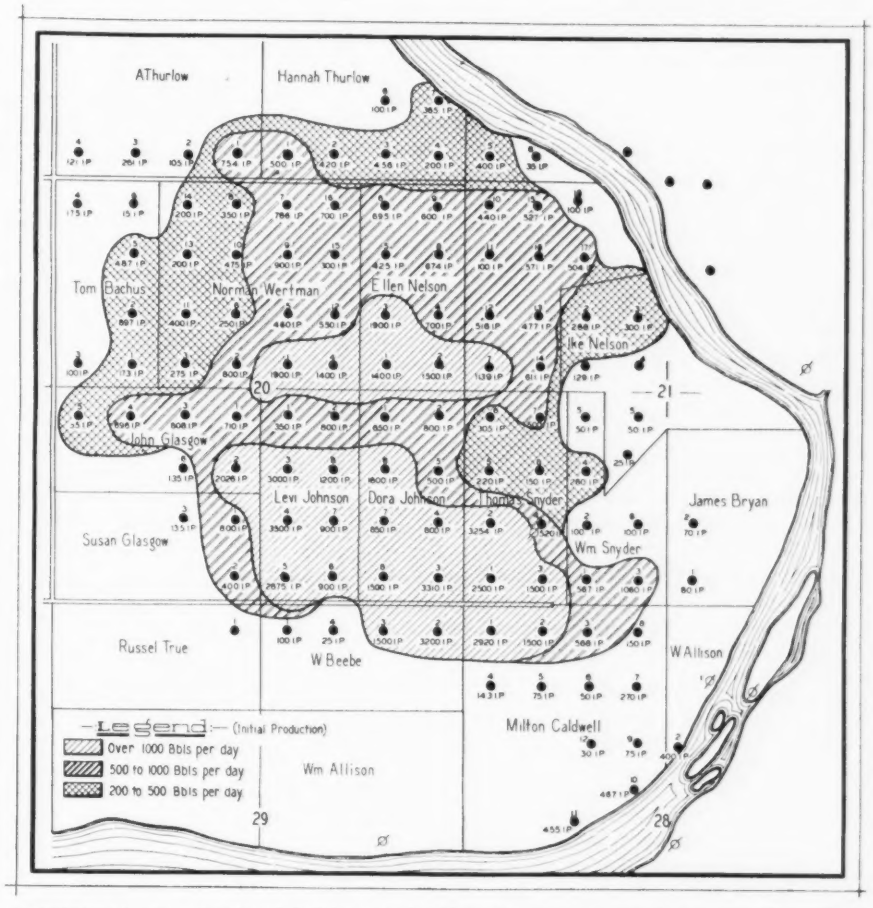
The areas of high yield are also those of high cumulative gas/oil ratios, indicating that the suddenly released gas, produced first at atmospheric and subsequently at less than atmospheric, pressure, left behind it a considerable quantity of oil which should be recoverable through a restoration of pressure.

The sudden release of the gas on the highs also gave the gas in the lower parts of the structure a chance to migrate without using much of its potential energy in moving oil. An estimated increased recovery of 3,500,000 barrels of oil is expected to result from the restoration of the pressure, while the cost of the operation due to the amount of material already in place and cheaply available, is not expected to exceed $100 per acre.

New Plant Safety Director

CLEVELAND, Feb. 8.—Douglas M. King has been made acting safety director for the Okmulgee refinery of the Empire Oil & Refining Co. He has been captain of the company first aid team there for the past two years.

A new safety contest has been begun at this plant which will continue through 1929. Last year seven groups at the plant had 100 per cent safety records.



Contoured on a basis of initial production, the accompanying map shows the even extent and location of the "sweet spots" in the field. On an average, the areas of high initial production have been also those of high cumulative production, both of oil and gas. The areas of high cumulative gas production and of high oil production coincide pretty well throughout the field

Most Important Strike in Oklahoma, Oklahoma City Well Is Called

TULSA, Feb. 7

IN THE preliminary report on the oil and gas geology of Oklahoma county, written by C. L. Cooper, under the auspices of the Oklahoma Geological Survey, the Indian Territory Illuminating Oil Co.-Foster Petroleum Corp. strike southeast of Oklahoma City is spoken of as the most important wildcat strike of 1928 in Oklahoma.

The report deals with the stratigraphy and structural conditions of the county, giving as well some history of the oil and gas development. Illustrations include a geological and production map of the county, a cross section showing the correlation of wells in the Oklahoma City area with the Shell Petroleum Corp. discovery well in Logan county, about 45 miles north of the I.T.I.O. producer.

Illustrations also include a structure trend map, which is published herewith. The data included in the report is such as is now available for publication. There is considerable information on the geology of the area which is in the hands of oil operators, but which is kept confidential by them. A final report, to be issued at some later date, will, of course, be more comprehensive.

In discussing the surface formations as found in the county, Mr. Cooper says, "The rocks exposed in Oklahoma county, with the exception of recent alluviam found along the North Canadian River, belong to the Enid group of Permian red beds. They are, in descending order, the Duncan sandstone, Hennessy shale, Garber sandstone, and Wellington formation," and "The detailed characteristics of these formations, found on the surface in Oklahoma county, are the same as in their occurrences in adjoining areas."

In the discussion of the subsurface formations encountered in the county the report states that, "Below the Permian there occurs a thick series of sandstones, shales and limestones making up the Pennsylvanian system. A comparison of this system of rocks with a detailed section for north-central Oklahoma shows a thickening southward of all the Pennsylvanian rocks.

"These formations are different from the same section to the north in that a large number of the limestones have disappeared and there is a large increase in the amount of shale."

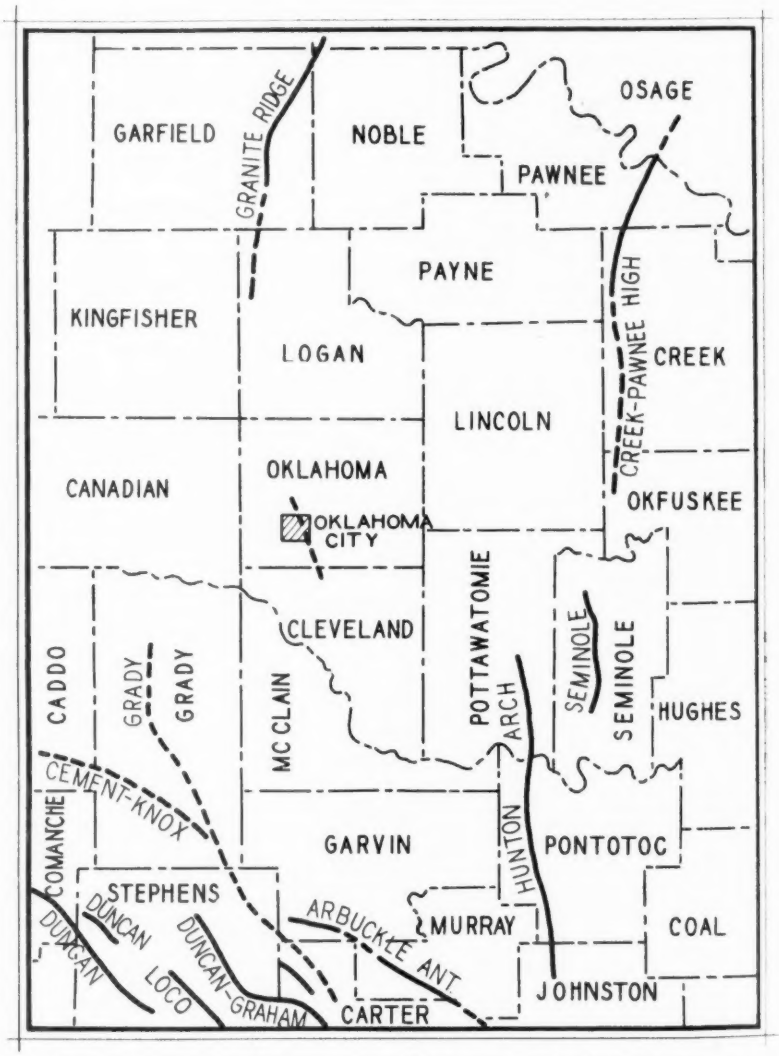
As a first producer of commercial importance in the county, the I.T.I.O. well near Oklahoma City is used as a basis for comparison with other sections. In his report Mr. Cooper favors the correlation of the producing horizon of the well with the Arbuckle or silicious lime, rather than with the post-Wilcox dolomite. If this is the case, says the report, it means that the pre-Pennsylvanian-post Arbuckle formations present in the Cromwell-Franklin test north of the city are absent from the section southeast, in the area of the big well. It is quite likely, says Mr. Cooper, that the conditions found at Garber may be duplicated in this new field.

The principal reasons listed in the report for this correlation are the dolomitic character and the absence of fossils in the limestone section in which the production occurs. Says the report, "This is in complete contrast with the formations encountered in the Cromwell Franklin well. In this well the formations from the Oswego lime to the Wilcox have been checked, both by lithology and fossils, with the same formations in other areas.

"The log of the I.T.I.O.-Foster Petroleum Corp. well can not be correlated with the well to the north by either of these methods."

Mr. Cooper goes on to say that there is not as yet sufficient data on which to base any definite conclusions, so that any generalities must, of necessity, be hypothetical.

In considering the broad structural



This map, reproduced from the Oklahoma Geological Survey preliminary report on the oil and gas geology of Oklahoma, shows the principal structural trends and their relation to the Oklahoma City structure

folds of central Oklahoma, the report says, "the first to be considered are: the Arbuckle anticline and the Hunton arch, with the associated folds on the south and the granite ridge on the north of Oklahoma county. It will be noted that the trend of the Arbuckle anticline and the folds to the west of it are trending almost N. 45 degrees, W., while the Hunton arch is practically north-south.

"The main axis of the Oklahoma City fold, running almost north-south, with a slight northwest-southeast trend, passes through the east side of 11N-3W, and extends at least as far north as the city limits. The Cromwell No. 1 Edwards, two miles north of the capitol, is thought to be on the west flank of a fold in this same trend, or on an extension of the south Oklahoma City structure.

"The general trend of this axis, if extended to the south, runs into the broad basin known as the Mill Creek syncline in Murray county."

It is expected that future drilling in adjacent counties will tell more concerning the relationship of the Oklahoma City fold and some of the other foldings in this part of the state.

Stock Control Sold by Westbrook-Thompson

HOUSTON, Feb. 9.—Sale of a majority stock interest in the Westbrook-Thompson Holding Corp., to a group of capitalists acting through Howard F. Brecht of New York, has been perfected at Forth Worth. A total of 950,000 shares were sold on a basis, including deferred payments, to eventually yield $4.30 a share. Stockholders in the holding company retain 900,000 shares of $1 par.

Properties of the Westbrook-Thompson Holding Corp. consist of a one-half interest in the joint operations of the Southern Crude Oil Purchasing Co., Pan American subsidiary, in Winkler county, west Texas. The properties have rated daily potential production under prorating practice of about 400,000 barrels daily and a pipeline allotment of approximately 38,000 barrels daily.

Stockholders selling to the Brecht syndicate received 50 cents a share, Feb. 1; are to get another 50 cents a share March 1; and future payments Feb. 1, 1930 and Feb. 1, 1931. Both deferred payments, the first of $1 a share and the second of $2, are to bear six per cent interest from Feb. 1, 1929, the stock being deposited in the meantime in the First National Bank at Fort Worth as security.

Whose Greasing Station, Mr. Alemite?

NOW that the Alemite people have gone into the grease business they just don't like the rest of the oil industry at all. The Alemite people don't like our grease, our greasing service, nor our stations. The whole regiment is just completely out of step with this new private.

And the Alemite people are making this dislike known over the entire nation through advertising space in national publications, which seemingly care little as to the good taste, good merchandising or the ethics used by their advertisers.

In the Feb. 9 issue of the *Saturday Evening Post*, the Alemite people speak thus lovingly of their competitors, the oil companies—

"The repair shops of the nation are filled with cars rushed there by improper lubrication. So are the junk yards." Thanks.

"Cheap, inferior greases, found in thousands of 'greasing stations,' are almost as ineffective as none at all.

"The obviously sensible thing . . . to avoid the roadside 'Greasing Station' entirely."

A fine, companionly "fair trade," thought—in these days of "enlightened competition" of ethics, etc., etc.

Who has greasing stations along the roadside?

Where else are greasing stations to be found?

From the reading of this advertisement it would seem that the Alemite people are warning their prospective customers away from every one's station except those bearing their yellow signs—not only the stations of the small jobber but also warning against the stations of the Standard of New Jersey, the Standard of California, The Texas Co., the Gulf and all the rest of the companies who we had always been led to believe generally paid their bills, made a good product—at least they have been accused of having some slight knowledge of how to make a good product—and who have kept the cars of the nation running all these years with lubricants and fuel. But the Alemite people start off by saying that these oil companies are responsible for all the cars in the repair shops and junk yards. At least that is a fair inference.

And now the Alemite people have made a special deal with the Ford Motor Co., whereby Alemite service will be rendered exclusively at Ford stations.

Every time an automobile company has tried to tie itself up to a particular brand of lubricating oil in the past it has found itself in serious trouble and has always hastened to get out of the deal. These motor companies did not seem to realize the number of cars bought by the oil industry until the cancellation of orders came in from oil companies who preferred to lubricate the cars they bought with their own oil and not with that specially blessed by the motor car manufacturer.

The last motor car company that tried this kept its vice president in charge of sales traveling right hard for a number of weeks visiting oil companies and groups of oil men explaining that it was all "a mistake."

Strong arm selling and advertising have no place in any business. They have not paid in the past and they are going to pay less in the future because it is not good sound business. You can't get customers by damning all of your competitors but it takes some people, both advertising and sales people, some time to find this out. Eventually, however, they get the point.

In the meantime, as we have urged many times before when oil companies have been unfair in their own advertising, it would be well for the American Petroleum Institute, especially now that it has taken up marketing ethics, to get into the subject of unfair sales and advertising methods, which tend not only to be unfair and unjust toward the rest of the industry but which put the industry in the wrong light before its customers—the general public.

The old golden rule, sometimes lost sight of, is still quite to the point—"Do unto others as you would be done by." But perhaps in the case of the Alemite people they have old David Harum's qualification in mind—"Only do it first."—W. C. P.

Reviews of World Production to Feature A.I.M.E. Meeting

BARTLESVILLE, Feb. 8

A COMPREHENSIVE and authoritative series of reviews of oil production in the principal producing countries of the world is one of the features planned for the forthcoming meeting of the Petroleum Division of the A. I. M. E., which will be held in New York City at the Engineering Societies Building, 29 West 39th Street, on February 20 and 21.

The Petroleum Division session will be held on Wednesday and Thursday, February 20 and 21, with a general session preceded by a banquet set for Thursday evening.

The foreign reviews will be presented on Wednesday afternoon as follows:

Canada, by G. R. Elliott, Calgary, Canada.

Russia, by Basil Zavoico, New York City.

Roumania, by George Anagnostache of the Roumanian Legation, Washington.

Persia and Iraq, by Sir John Cadman of the Anglo-Persian Oil Co., Ltd., London.

Mexico, by V. R. Garfias of Henry L. Doherty & Co., New York City.

Venezuela, by H. J. Wasson, New York City.

Argentine, by Jose M. Sobral, Buenos Aires, Argentina.

Peru, by A. M. McQueen of the International Petroleum Co., Ltd., Toronto, Canada.

Colombia, by J. T. Duce of the Texas Company, New York City.

Bolivia, by Gilbert P. Moore, New York City.

On Thursday morning and afternoon the following reviews of domestic producing areas will be given.

United States, by Joseph Jensen, Associated Oil Co., Los Angeles, Calif.

California, by W. R. Wardner, Boston Petroleum Co., Bakersfield, Calif.

Oklahoma, by Earl P. Hindes, Empire Oil & Refining Co., Bartlesville, Okla.

Kansas, by Anthony Folger, Wichita, Kansas.

Permian Basin, West Texas, Panhandle, Eastern New Mexico, by A. R. Denison, Amerada Petroleum Corp., Fort Worth.

North and Central Texas, by W. G. Wender, Amerada Petroleum Corp., Fort Worth.

East Texas and the Balcones Fault Zone, by Dr. F. H. Lahee and F. E. Heath, Sun Oil Company, Dallas.

Gulf Coast—Texas and Louisiana, by W. F. Bowman and John Vetter, Associated Oil Company, Houston.

Southwest Texas, by Olin G. Bell, Humble Oil Co., Laredo, Texas.

Rocky Mountain District, by Dean Winchester, Denver.

Arkansas, Mississippi and North Louisiana, by H. G. Schneider, Dixie Oil Co., Shreveport.

Montana, by Ralph Arnold, Los Angeles.

Appalachian Fields, by Jerry Newby, Bradford, Pa.

The banquet on Thursday evening will be followed by papers on the Crude Oil Supply, by Howard S. Bryant, Skelly Oil Co., Tulsa, Okla., and on the World's Oil Supply, by V. R. Garfias, Henry L. Doherty & Co., New York City. H. W. Camp of the Empire Oil & Refining Co., Tulsa, will present a paper at this general session on Developments in Refining of Petroleum and its Constituents for the year 1928.

A cordial invitation is extended to all engineers in the industry and others interested in the program. A program of entertainment has been arranged for the wives of visitors. Special half fare return railroad fares will be allowed those who take advantage of the certificate plan.

Harvester Co. Gives Advertising Helps

CHICAGO—Advertising helps on mass selling have been published in a handy booklet by the International Harvester Co., 606 S. Michigan avenue, here. While it is designed primarily for use in its own organization, the booklet contains matter of interest in general advertising and editorial fields.

"Builders and doers in the world of business," the booklet says, "are never done with education, never too proud to admit that ideas are scarce and that when a good one comes along, it will be given a chance to prove itself.

"This is an interlocking world. It is a rare man who can continue to be a success by himself alone, and who can afford to ignore what other men are thinking and doing in competitive fields. The wise men are keeping posted on modern methods and equipment."

N. P. A. Spring Meeting

CLEVELAND, Feb. 8.—The semi-annual meeting of the National Petroleum Association will be held at the Riverside hotel, Cambridge Springs, Pa., April 25 and 26. Work is going forward on the program which will give special attention to fire and safety activities, accounting practice and statistics, manufacturing, tests and standards and trade conditions.

The Complex for Big Gasoline Gallonage

From the Ohio Petroleum Marketer

It is indeed puzzling to understand the psychology of this "low price and big gallonage" complex on the part of so many Ohio oil dealers in view of the fact that in every line of industry the most successful concerns are those that operate on a profit-quality-service basis.

For example, take the Steinway piano, or Pillsbury's flour, the Victor talking machine; Hart, Shaffner & Marx clothes, Berkey & Gay furniture—all these, and hundreds of just such others, are leaders in their line because they have merchandised their products instead of being dominated by low price competition.

Right here in Ohio, Pocahontas coal is always readily sold at a higher price than other grades, because it is known as a better coal. The miners and shippers of this coal do not attempt to sell it on a "price" basis, but on the contrary, "market" their product on a fair-profit, good-quality basis.

Dozens of these "gallonage-mad" dealers have told me during the past six months that they were not making any money, yet every one of them until very recently was going along the same old ruinous "get gallonage" schedule. Surely it is time for these men, and all others of this class, to wake up, to take stock of their methods of operation; to put their business upon a "fair-profit" basis, regardless of gallonage.

The customer whose patronage does not bring you a fair, reasonable profit is no asset to your business, but rather a liability, and it behooves you to cut loose from him. Instead of bending all your efforts to sell price and gallonage, put the same effort into really merchandising your products and you'll find more profit for you in the cash register at the close of each day's business.

YOUNGSTOWN, O., Feb. 8.—A visit to the oil fields of South America is being made by R. M. Dinges, Continental Supply Co., and J. A. Mussler, Youngstown Sheet & Tube Co., who sailed from New York the first week in February.

Both Mr. Dinges and Mr. Mussler may be reached in care of the American Consul at Maracaibo, Venezuela.

Review of Late Production News

WITH another 10,000-barrel increase in production in Santa Fe Springs, daily average production for the country gained 13,500 barrels during the week ended Feb. 9, to 2,693,550 barrels, according to the American Petroleum Institute.

Total new crude supply went over the 3,000,000 barrel mark for the first time in oil history, it reaching 3,015,979 barrels for the past week, compared with new supply of 2,909,050 barrels week ended Feb. 2. Crude imports were at the rate of 322,429 barrels daily, an increase of 93,429 barrels over the previous week.

Outside of Santa Fe Springs, the largest increase in any single field was in Pecos county, West Texas, which gained 8,500 barrels on daily average. Winkler county balanced that with a decrease of 7,250 barrels.

Maud pool in Oklahoma gained 5,150 barrels. Ventura Avenue fell off 2,000 barrels.

Oklahoma-Kansas

THE Misener sand area of the Maud pool in western Seminole county is now the scene of the biggest well producing in Oklahoma. The well was the Gypsy Oil Co. No. 3 Miller, which reached a peak production of 940 barrels an hour shortly after being drilled. Lack of tankage to handle a well of such tremendous size, plus the high pressure of the 20,000,000 feet of gas which accompanied the oil, caused the well to get out of control for a short while. Friday morning's gage showed about 8,500 barrels of oil in the tanks, with an estimated 4,000 barrels lost. This field, long regarded as a freak because of the previous history of the Misener sand, is now producing about 40,000 barrels from 56 wells.

A big gas well in the NE NW NE of 7-8-9, Hughes county, will help to relieve any fuel shortage in the Mission and Maud areas. Good for 70,000,000 feet of gas per day, the well is under complete control, the gas being handled by the Tristate Gas Co., a subsidiary of the Independent's. The Tristate is one of the largest sellers of gas to operators in the general Seminole area.

A Wilcox producer, good for better than 700 barrels daily natural is in offsetting the Wilcox failure of T. B. Slick's west of the Allen field. The new well is the Sinclair's, as was the case with the Wilcox discovery in the district. The new one, in the SE NE SE of 23-5-7 topped the Wilcox at 4175, and at last reports was flowing at the rate of 770 barrels in 19 hours from a total depth of 4183. The producer is more than 150 feet higher on the structure than is the offsetting failure of Slick's.

In Kansas, the most active part of the play has been taken, away, temporarily at least, from the Valley Center pool, and transferred to the Marion county development in Twp. 19S-3E. Several wells have been completed in this new area, the latest and by far the best being the Shell Petroleum Corp. producer in NW SW of 7-19S-3E, which is swabbing about 730 barrels daily from the deeper pay at 2803 to 2815. By deeper pay in this area is meant the as yet unidentified pay below the Mississippi lime from which the Valley Center pool is producing.

Valley Center has a new well, good for about 350 barrels, but not located so as to prove any new territory. It is the Hayes & Reynolds No. 1 Roll, SW NW NE of 7-26S-1E, which topped the pay at 3374 feet. The well lies between the discovery well and the proven north edge of the pool.

California

THREE deep wells at Santa Fe Springs have penetrated one if not two new deeper oil sands, and it is indicated that the new zone or zones will cover an area of close to 1600 acres, or equal to the old Meyer zone. The Bickbee sand, now being developed, covers an area of approximately 800 acres, and the Buckbee zones wells are showing marked decreases. The finding of deeper zone or zones calls for another drilling campaign in this townlot field, with probably a new high production in June or July.

A wildcat drilled by Continental Oil Co. in Santa Barbara County about 12 miles east of Santa Barbara picked up a gas sand at 3990 feet and drilled in 6 feet. The pressure was so heavy that it was necessary to shut down and change to steam for power, preparatory to setting a string of pipe for a test. Continental holds 1500 acres in a large block and appears to control the field, if it proves to be a field.

Thirty-five wells are drilling at Lawndale with 12 holes drilling below 3000 feet. Shell Oil Co. will build a pipe line into field and Standard Oil Co. has a trunk line through the field that can be connected up whenever necessary.

Long Beach still boasts 150 drilling wells with indications that the productive area will extend into the old Northwest extension.

Rocky Mountains

THE Utah Southern Oil company completed the deepest well on Garland structure, northern Wyoming, last week as a fifteen million cubic foot gasser; it had been planned as a deep test for oil. The Honolulu Oil company's wildcat well on Four Bear structure in northern Wyoming produced a thousand barrels of heavy black oil in three days; this was a surprise as it had been thought that the well would not be good for more than fifty barrels. It is said in Cody that another refinery may be built there this spring, perhaps by the Continental Oil company.

Interest in Colorado operations continues to be centered in the Vineland district, where three or more wells are to be started immediately. The discovery well, about seven miles southeast of Pueblo, will be cased and tested immediately.

Marland Oil company purchased a tract on the Chimney Rock structure, on the Navajo Indian reservation, about 25 miles west of Farmington, N. M. at a sale held two weeks ago.

Ohio Oil Co. will probably drill a wildcat deep test on Sheldon Dome, in Fremont county, Wyoming, this coming summer, having taken options on a block of acreage to hold while it core drills the structure. Kinney Coastal Oil company has spudded in its well on the Pilot Butte structure, in Fremont county, Wyoming, and reports a depth of 100 feet. The thermometer registered 40 degrees below zero while all this was taking place.

Observe the Sabbath and Save the Market

CONSIDERABLE discussion has been aroused by the editorial suggestion in NATIONAL PETROLEUM NEWS of Feb. 6 that proration of production be put on a time, rather than a percentage basis. The editorial was titled, "Why Overproduce Oil on Sunday?"

Here in the Mid-Continent both objection to and agreement with the suggestion have been voiced. The writer has had a number of telephone calls, some approving and some condemning. The partisans are not lined up on the basis of relationship to the industry. There are operating men on both sides and there are executives on both sides. We have had more bouquets than brickbats.

The objections to shutting down for a stated period, as an emergency measure to reduce production, are several. One is that there should be continuity of operation on gas lift wells. If they are shut down, it is argued, the high pressures required to "break them over", or resume the flow, impose a severe strain on the compressors and because of the high temperatures set up increase the fire hazard. Another objection is that wells which produce important amounts of water with the oil must be operated as continuously as possible to keep ahead of the water—that wells may be ruined for all time if they are left standing.

We shall not rebut this testimony except to say that one superintendent asserts that by the method he employs his starting pressures on wells are so little higher than his regular operating pressures as to place no additional burden on his compressors. As for wells that make water, all of them are off production from time to time—sometimes for two or three days. However, there are fields and leases where the water is sufficient of a menace to the final economic return as to make it necessary to except them from general shut down of production.

But—

The cake cannot be eaten and hoarded too. It is one thing or another. The production of crude oil must be brought down and the new fields checked or the price will come down again. The pitiless working of the law of supply and demand may be in full view while the year is young. And the need of the moment is some method that will work in a hurry.

Sunday shut downs are not new in some fields. In Kentucky, for example, the six-day week is general. No drilling is done and the only wells that are pumped are those under vacuum, where continuity of operation is necessary.

The percentage method of prorating gas lift wells has the same drawback as has the complete shut down. Application of the restriction required to reduce production frequently kills the well and the high starting pressure must be resorted to. There is endless fiddling with the wells to keep them going. The consequence is that they are never held to the figure agreed upon. At least they have not been in Mid-Continent prorations of the past two years.

The six-day week in the important producing states would cut production by approximately one-seventh and, if applied to drilling wells would retard the rate of completion the same figure. And if that failed to effect the needed balance, add a few more hours of idle time. It is the simple way to prorate.—L. E. S.

Magnolia's Pipeline Runs Show Drop

HOUSTON, Feb. 9.—Magnolia Petroleum Company, pipeline department, announces from Dallas headquarters the following crude oil runs for January, which are shown in comparison with December.

	December	January
Hewitt-Graham	150,886.08	141,615.48
Headleton	216,823.21	213,954.58
Cushing	112,697.37	110,814.20
Yale	44,587.44	44,609.55
Duncan	42,857.68	29,631.90
Augusta	34,152.51	34,088.47
Walters-Beaver-Creek	6,090.93	4,603.04
Burbank	88.73	84.44
Wewoka	1,265,596.07	1,030,537.16
Seminole	113,511.79	85,854.27
Total Okla.-Kans.	1,987,291.81	1,695,793.09
Archer	26,701.56	24,956.54
Burkburnett	63,739.80	66,481.09
Comanche	17,304.95	16,665.84
Electra	97,957.33	95,010.62
Corsicana Heavy	8,546.32	8,561.11
Corsicana Light	11,827.16	11,744.40
Henrietta	2,123.26	2,510.33
Iatan	26,057.83	24,756.57
Luling	360,992.78	319,837.49
Lytton Springs	39,416.62	37,184.65
Mexia-Wortham	22,746.35	22,020.42
Mirando	227,425.58	218,326.06
Olden	9,699.45	9,144.59
Panhandle	75,192.77	86,336.58
Panola	1,792.58	642.84
Stephens	8,872.06	8,509.17
Thrall	1,126.90	1,057.99
Gulf Coast	686.13	
Crane-Upton	219,992.31	122,192.29
Glasscock	126,246.22	116,582.70
Winkler	117,001.23	111,902.21
Shelby County		306.08
Total Texas	1,465,449.19	1,304,729.57
Haynesville	2,095.64	2,538.46
Bull Bayou	41,247.96	41,794.60
Cotton Valley	23,489.11	23,092.44
Pine Island	30,209.86	30,284.34
Hackberry	96,195.69	139,900.00
Total Louisiana	193,238.26	237,609.84
El Dorado Light	13,614.84	11,376.46
East El Dorado	3,856.86	4,224.36
Smackover	80,535.87	72,131.38
Rainbow	92,852.32	86,985.87
Total Arkansas	190,859.89	174,718.07
GRAND TOTAL	3,836,839.15	3,412,850.57

OKLAHOMA-KANSAS

Report for January		Dly. Avg.
Runs	2,214,105.00	71,423.00
Shipments	2,139,066.00	69,002.00
Total stock	9,548,097.00	

TEXAS

Wichita, Wilbarger, Archer		
Runs	187,045.00	6,034.00
Shipments	202,054.00	6,518.00
Petrolia		
Runs	2,510.00	81.00
Shipments	2,510.00	81.00
Eastland, Stephens		
Runs	34,320.00	1,107.00
Shipments		

Total stock—138,874.00—North Central Texas fields.

Marland Is Reopening Ft. Worth Offices

HOUSTON, Feb. 8.—Marland Production Co. is going ahead with details of re-establishing a Texas-New Mexico division office at Fort Worth, to be in charge of George H. McIntyre. Plans are now being worked out by Mr. McIntyre with E. J. Nicklos, vice president, at Ponca City, Okla., headquarters. The organization will consist of production, land, geological, scouting and legal departments. Former executives who resigned after Dan J. Moran became president of the Marland companies were not replaced, pending the establishment of a new organization, in which period the old offices at Fort Worth were closed.

Texas Land Patents Are Protected

HOUSTON, Feb. 8.—State patents to lands lying across, or partly across, Texas water courses are validated by a bill passed by the legislature. The measure will go into effect as soon as approved by the governor, thereby protecting valuable oil lands in Texas from title litigation. Millions of acres situated in water courses that are dry except after occasional rains are protected from filings by permit grabbers under the state's navigable stream reservations.

Ask Shippers and Carriers To Agree on Rates

By Allen S. James
N. P. N. STAFF WRITER

Staff Special
TULSA, Feb. 9

A SUGGESTION by Examiner Burton Fuller that refined oil products shippers and carriers attempt to work out together an aggregate scale of rates without the necessity of having the Interstate Commerce Commission decide the matter, and the presentation by a group of Oklahoma and Kansas refiners of a proposal that freight rates under investigation be put on a block system, furnished the high points in the hearing in Tulsa this week of I. C. C. Docket No. 17,000 Part 4-A, commonly referred to as the Southwestern freight rates case.

The investigation is for the purpose of determining equitable freight rates between all points in the Southwest, the states included being Kansas, southern Missouri, Oklahoma, Texas, Arkansas and Louisiana west of the Mississippi river. The hearing was conducted by Examiners Fuller and P. S. Peyser, with representatives of the state corporation commissions of Arkansas, Louisiana, Texas, Oklahoma and Kansas sitting with the examiners.

Examiner Fuller's suggestion was in line with the reported attitude of Chairman Lewis of the Interstate Commerce Commission, who is understood to be in favor of shippers and carriers working together as much as possible without outside interference or assistance.

The group of refiners and shippers interested in the case already have taken steps to get together and work along the lines suggested by Examiner Fuller. The railroad officials were understood to be planning similar action. If the two groups agree among themselves steps will be taken to get representatives of the shippers and carriers together for a conference looking toward the possible adjustment of rates acceptable to both parties. This conference would be held at Hot Springs, Ark., out of consideration for the Arkansas Corporation Commission.

At the present time the rates on refined petroleum products within Oklahoma, Kansas, Arkansas and Louisiana and to some extent between the states now are lower than those which apply in Texas. The Texas rates are based on the old common point system, which makes rates high for short distances with a common rate for all points beyond a certain mileage distance, the rate to apply regardless of the distance of the haul.

Among the individual complaints heard was one by interested shippers who have taken the position that there should be no differential rates in Texas. This position is the outgrowth of the development of oil production and the resultant building of refineries in west Texas. When the differential rates were placed in force it was generally understood the differentials were in order to aid the weaker lines in west Texas. Since the oil development, however, interested parties contend that the railroads are in an extremely better financial position and should not be entitled to the differentials.

The first hearing was conducted by Examiners Fuller and Peyser at Dallas during the week of Jan. 28-Feb. 2. At that time the Texas Corp., the Gulf Refining Co. and the Magnolia Petroleum Co., in whose names the original complaint was filed, presented their evidence and proposed rates based on a mileage scale.

The hearing was to be resumed in Kansas City Feb. 11. The State Corporation Commission of Missouri will be represented at this hearing. The examiners will also hear at this time a complaint filed by 150 oil jobbers in Missouri who have petitioned the Interstate Commerce Commission for relief from what they contend are unreasonable freight rates to Missouri points from the Mid-Continent.

Following the Kansas City hearing the railroads will be given 20 days in which to furnish all interested parties copies of their proposals.

Examiners Fuller and Peyser have set March 25 as the tentative date for the hearing on the proposed oil rate adjustments to the east and south. This hearing will be conducted at New Orleans. The hearing will embrace the territory on and west of the Mobile & Ohio railroad and west of the Mississippi river.

Gasoline Plant Workers To Meet at Ranger

Staff Special

TULSA, Feb. 7.—The program for the Natural Gasoline Association of America's annual plant operators meeting at Ranger, Tex., has been announced by the program committee. The meeting will be held Feb. 26.

The morning and afternoon sessions will be devoted to presentation of papers on natural gasoline plant operation. A barbecue lunch will be served at noon. The evening session will be devoted to safety first discussions. The complete program follows:

Morning Session

"Operation and Care of Electrical Equipment"—by Clifford Clegg, manager Texas Electric Service Corp.

"Absorption Oils"—by P. Beo, director of research, Arab Gasoline Co.

Discussion to follow after each paper. Recess for barbecue lunch, furnished by the Natural Gasoline Association of America.

Afternoon Session

"Distillation Apparatus in the Use of Natural Gasoline Manufacturing"—by J. E. Kobernick, vice-president, general manager, Engineering Research & Equipment Co.

"Belts"—by John A. Guffey, Industrial Belting Co.

"Repressuring and its Relation to Natural Gasoline Production"—by Ed. Guidinger, Phillips Petroleum Co.

"Operation and Maintenance of New Ford Equipment"—by E. Bonham, Ford Agent, Breckenridge, Texas.

Discussion to follow after each paper.

Evening Session

"Accidents in Natural Gasoline Plants"—by C. L. Hightower, safety director, Texas Pacific Coal & Oil Co.

"Benefits of Safety to the Operator and his Family"—by Don Wallace, safety director, Mid-Continent Oil & Gas Association.

New York Oil Men Hold Meeting in Waldorf

NEW YORK, Feb. 9.—The New York Oil Trades Association, Inc., held its thirteenth annual banquet in the grand ballroom of the Waldorf-Astoria hotel on Feb. 6. Well over 400 members of the oil industry and allied trades attended. Incidentally it was the last meeting the association will hold in the Waldorf for the old hotel, the scene of all of the organization's thirteen annual events is to be torn down shortly.

In memory of the occasion, "Oscar", the maitre d'hotel, was an honored guest. The few serious minutes of the evening were given over to an expression of appreciation by Albert J. Squier on behalf of the Association for the many good times "Oscar" has provided. In acknowledging the compliment, "Oscar" assured the oil men that Waldorf-Astoria would continue as the name of a hotel in New York City.

A dinner was served with vaudeville acts entertaining in between courses. Formal proceedings were brought to a close around midnight at which time the men retired to the Waldorf apartments where cards, etc., were the sources of amusement.

Recommend Tax Change

TULSA, Feb. 9.—Announcement has been made that the Legislative Committee of the Oklahoma Oil Jobbers Association has decided to recommend a change in the proposed gasoline tax law amendment relative to the grade of goods on which the tax should apply. Previously the committee had decided to recommend a tax on gasoline of 50 gravity or above. The new recommendation is for a tax on all gasolines which have a flash point under 90 degrees F.

These New
WHEATON Quick Hose Couplings
Will Pay for Themselves

Type 36
Quick Hose Coupling

Type 36 has an adapter which is simply attached to the hose end of the faucet and left there. The *Coupling* is attached to the *hose* and left *there*. Tight connections are then made by just seating the adapter in the *Coupling* and making a part turn with the wings. Just a few seconds is all the time that is required.

WITH these remarkable new Wheaton Quick Hose Couplings, it is no longer necessary to screw the delivery hose on and off the faucet every time a connection is made. Instead, connections are made by simply a part turn of the coupling, as explained under the illustrations. In addition, there is no longer any danger of stripping or wearing down the threads on the faucet or in the coupling. And the time required in making deliveries is reduced to a minimum. This *double saving*—of *threads* and of *time*—returns the cost many times over.

Read how quickly and easily each style operates—Type 34 Folding Handle Quick Hose Coupling, shown at the right; Type 36, pictured at the left. See how vast an improvement they make over all couplings hitherto used. Then send for a sample of one or both. Give it a 30 or 60 days' trial. If it does not prove entirely satisfactory, you may return it for credit or refund. Illustrated circulars will gladly be sent to you on request.

A. W. WHEATON BRASS WORKS
NEWARK, N. J.

Empire Brass Mfg. Co., Ltd., London, Ontario
Canadian Manufacturers and Distributors

Type 34
Folding Handle
Quick Hose Coupling
slips right into your hose carrier

With Type 34, a special spout is simply screwed into the faucet and *left there*. The *Coupling* is attached by simply slipping it over the lugs on the spout, and making a part turn with the handle. A ball and slot holds the *openings for the lugs* ready for quick connection—no fumbling, no loss of time. Type 34, with its *folding handles*, is made *especially* to slip into your hose carrier.

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The Editors' Viewpoint

National Petroleum News

Our Industry and the Stock Market

HOW much criticism of the oil industry is due to people playing oil stocks on the market and losing?

A fair question in these days of the seeming end of the tremendous bull stock market of the past year. And a still fairer question in view of all the oil royalty companies that are blossoming forth, many on an exceedingly unsound financial basis.

When one has made a mistake, the inclination is to blame everything but one's own judgment and action, so it is quite probable that losses on oil stocks in the market will, in part at least, be blamed upon the oil industry and not upon the foolish judgment of the stock gambler.

People, as a whole, are really ignorant of what makes a stock go up or down, are ignorant of how to judge a stock. The average person who asks you, an oil man, "what is such and such an oil stock going to do?" does not want to know how the company is coming along, how well it may be managed, how excellent its properties are, etc. He only wants to know will the stock go up, or down on the stock market, and not being a clairvoyant you can't tell him.

The many thousands of oil men and their employes are in daily contact with many more thousands of oil stock investors and speculators. The members of the oil industry can do much toward helping the public to a proper conception of oil stocks and oil investments, but we first must have the facts straight in our own minds. This can be done by giving some heed to the news of the whole oil industry, producing, refining and marketing and by studying the financial pages run in this paper every week. See that the general public understands the facts of the industry, so far as you can give them to it.—W. C. P.

Technology and Business Sense

THE appointment of a young engineer to a position in charge of worldwide producing operations brings attention again to the opportunities presented the technically trained oil man. Identity of that young engineer, and something of his record, have been told in recent week's news. Here, it is important to note the broader considerations that made his rise possible.

Beginning his career as a well-equipped theoretical geologist, this future engineer and executive was not content to run levels or study outcrops. Having a commercial bent, pure science had only its incidental uses in his future activities.

His understanding of areal geology consolidated from the theoretical into the practical, this ambitious youngster turned next to subsurface work; and, finally, to development and production engineering, which brought him to the superintendency of a division in a major producing company. Later, when a vacancy existed, he was promoted to head the land and geological departments. Now as an assistant to the producing vice president of one of the largest units in world petroleum affairs, he takes direct charge of foreign operations.

It was not many years ago that a similarly trained young man on the Pacific Coast was selected by the largest of the foreign-owned oil groups to take full charge of its worldwide production, with European headquarters. That man later resigned to head an American-owned Pacific coast company which he helped to organize.

It is true that not all engineers are fitted for executive positions any more than that all geologists can hope to become outstanding in their profession. There are mediocre lawyers and doctors alongside those that have attained preeminence. The fact remains, however, that the well-grounded geologist or engineer of executive ability has more than an even break in this industry of ours if he will familiarize himself with its various phases and apply business sense along with his technical knowledge.—P. W.

Selling Only in Profitable Markets

SHOULD oil ever be developed in large quantities—internationally speaking—in Canada, the oil industry will probably find the Canadian government insisting that it so operate as to make certain of a profit. Probably not only the production of crude oil will be limited to the needs of the market but also the output of refineries.

At least that is what the Canadian government has just succeeded in doing with the manufacturers of paper for newspapers. A large part of the newsprint used in this country comes from Canada. According to reports from that country, its manufacture has not been as profitable as it ought to be, so under the auspices of the government the manufacturers got together and agreed on running their paper mills to 80 per cent of their capacity, the product to be sold at not below an agreed upon minimum price.

Under our laws, American business cannot go this far at the present time for sales in this country. Under the Webb-Pomerene act, however, American oil companies have joined to handle their export business on this basis. Through this combination they are participating in a world wide understanding with foreign oil interests whereby there will not be unnecessary and unprofitable competition.

But what can be done in this country is for each oil man to make use of all the statistics that are available as to market consumption and each man figure out for himself what his probable increase in HIS OWN NATURAL market will be and then restrict his production and sales efforts to that figure. This carefully planned operating policy is just plain, common sense.

The oil industry is making headway on restricting crude production with the active assistance of the federal and state governments, and some headway has been made in intelligent refinery operation. But the idea of restriction to profitable markets can well be spread over the entire industry. It remains for each individual oil man to do it for himself, then it will be done for the whole industry.—W. C. P.

The Mid-Continent Skyline

By Lawrence E. Smith

Tulsa

THE tragic death of George L. Miller, of the famous 101 Ranch, near Ponca City, removed one of the most colorful figures Oklahoma has yet developed and one of a type that is coming to be entirely too scarce for the good of society. Manager of an empire of 110,000 acres, wherein he was emperor, friend and entertainer of the celebrity, helper of the needy, he lived a life filled to its brim with constructive activity.

George Miller was more than an individual; he was an institution. He came up from poverty. The late James J. McGraw used to say that it was a contest between the McGraws and the Millers as to which could starve to death first. Theirs was the lot of the rugged pioneer who is that not because he thinks he is doing something noble, but because there is nothing else for him to do. The Miller brothers, of whom only Zack now lives—Joe was killed more than a year ago by monoxide gas in his garage—came through their several periods of adversity and became nationally famous. Only the man who lived through the hardships of this country when it was raw prairie land fully appreciates the Miller achievement.

The 101 Ranch show is, of course, known everywhere in the United States and part of Europe. Curiously enough, few Oklahomans know much about the show. All know of the ranch. Every visitor was welcome and was accorded the full courtesies of the place. All the celebrities that came this way just had to pay the ranch a visit. The list is a long one and includes famous writers, sportsmen and people of the theatrical and musical world.

None mourn George Miller more sincerely than the Ponca, Otoe and other Indians. He was counsellor and confessor to them. They brought their troubles into his busy life and were never disappointed. Whether they needed comfort in hours of bereavement or financial help, they always got attention. On occasion, he even delivered a funeral address at the grave of an Indian. And the festivals he arranged for them were high spots in their lives.

Much of the acreage in the present holdings was assembled by Col. George W. Miller, who died several years ago. At his death the ranch was left to the three sons. George assumed a leading part in the management. Two nephews, George W. and Joe have been trained in the operating policies and details of the ranch, the show and other Miller interests, and will assist Zack. A daughter, Miss Margaret, who is in school in Oakland, Calif., survives George. She is 14 years old.

The funeral services, conducted at the ranch white house on Feb. 6, saw a large throng of people, prominent and otherwise, in attendance. The active pallbearers were Fred Olmstead, Harry Cragin, L. H. Wentz, Felix Duvall and Corb Sarchet, of Ponca City; Henry McGraw, Tulsa; Frank Phillips, Bartlesville and Joseph Weaver, Eastland, Tex. Honorary pallbearers were acting Gov. W. J. Holloway, Oklahoma; John Harden, Oklahoma City; R. Otis McClintock, Waite Phillips and Frank Sowle, Tulsa; L. E. Phillips, Bartlesville; H. F. Sinclair, New York; Maj. Gordon W. Lillie (Pawnee Bill), Pawnee, Okla.; Col. Zack Mulhall, Mulhall, Okla.; C. F. Martin, J. S. Hutchins, Dan Donahoe, W. H. McFadden and John Huron, Ponca City.

J. R. McWilliams

* * *

W. Clark Morrison has been appointed general auditor of the Prairie Oil & Gas Co., succeeding the late Charles H. Oles, whose assistant he had been. Mr. Morrison has been with the Prairie for 10 years.

* * *

Newell G. Welty, of the public relations department of the Empire Companies at Bartlesville, has resigned to go with the firm of P. H. Whiting & Co., New York. As assistant to Keith Clevenger, head of the department, "Budge" has developed a wide acquaintance in the Mid-Continent.

* * *

Every few days we take time out for hearty laughter at the antics of the federal government on the Teapot Dome affair. The current cause of mirth is the attempt to collect from the Sinclair Crude Oil Purchasing Co. a bill that the defunct Mammoth Oil Co. couldn't pay. Quiet tip to the government: H. F. Sinclair is a stockholder in the Exchange National Bank of Tulsa and suit might be brought against that company, also.

* * *

Oklahoma legislators are thinking seriously of appropriating money to build a dome on the capitol. It has been a bobbed-tail looking affair ever since it was built in 1916 and has excited a fair amount of sarcastic comment.

* * *

Alex W. McCoy, vice-president of the Marland Production Co., has resigned. He has had charge of land and geology for the company since moving to Ponca City from Denver upward of a year ago. He has had wide geological and executive experience. For several years he was in charge of sub-surface work for the Empire Gas & Fuel Co., at Bartlesville. He was called to Denver upon the formation of the Marland Oil Co. of Colorado and when this company was blended into the Marland Production Co., he was moved to Ponca City. Mr. McCoy was one-time president of the American Association of Petroleum Geologists. His plans have not been announced,

but it is reported that he will shortly become associated with another company, in the executive capacity.

* * *

At the same time Mr. McCoy's resignation was announced, that of Dan Kygar, president of the Ponca City Gas Distributing Co. was made known. This is a Marland subsidiary. Mr. Kygar was also manager of the Marland pipe line interests. Harry Moreland, his assistant, succeeds him.

* * *

Report is current that E. W. Marland will announce before long the formation of a new producing company and that with him will be associated several of the men who were executives of the Marland companies under his management.

* * *

Pierce Petroleum Corp. announces two more of the tourist hotel-bus center buildings, of the type described in these columns some time back. The new ones will be two miles north of Miami, Okla., and just east of Tulsa, both on U. S. highway 66. Each will start off with a restaurant, rest rooms, emergency hospital and filling station, and later on hotel rooms will be provided.

* * *

The Wichita, Kans., boom has brought back to that state E. A. Riley. The initials do not identify him but the name "Trapshooter" does. He made name and fortune in the El Dorado field of Kansas in 1917, drilling the "Trapshooter" gusher which flowed around 20,000 barrels a day. He was active in the Ranger field in 1919 and later and has since participated in several plays in Texas and southern Oklahoma.

* * *

F. R. Shreves, president, and R. G. Rapp, secretary-treasurer of the Denver Producing & Refining Co., Okmulgee, have gone for a cruise of the West Indies, Bermuda and Central America. Their wives accompany them. The tour will last two months.

* * *

In the fire which destroyed 35 horses at the Wichita Saddle and Bridle Club last week, oil men were losers. Jack Vickers, of the Vickers Petroleum Co., owned five of the horses, show stuff, valued at $8000. Roy Streeter, Jim Woods and Tom Johnson were others who suffered.

* * *

Rep. E. B. Howard, of Tulsa, continues to push his bill for a tariff on crude oil and has gained the support of a number of independent producers. Hearings on the proposal will be held Feb. 21, 22 and 23, along with other items now on the free list.

* * *

P. C. Jones, president of the S. M. Jones Manufacturing Co., Toledo, spent several days in Tulsa on his way home from a trip that took him over Texas. Mr. Jones recently visited Pennsylvania oil centers and he says that producers are diligent there in new drilling and working over old wells to increase production and get the benefit of the current high market.

* * *

J. R. McWilliams, recently elected chairman of the Mid-Continent section, division of development and production engineering of the American Petroleum Institute, is busy working out arrangements to hold meetings in field centers. Mr. McWilliams has been active in this division since its creation. He has been in petroleum engineering for about four years, having charge of that work for the Skelly Oil Co. Mr. McWilliams is a graduate of the University of Michigan. He spent some time in valuation work and served in the natural gasoline division for a time, hence he has a pretty thorough understanding of what it is all about in the field. He is a staunch believer in the idea of getting the field man's point of view and the benefit of his experience. The field meeting venture should do much to increase the usefulness of the Mid-Continent section.

Lea County, N. M., to Have Pipeline Outlet

By Paul Wagner

N. P. N. STAFF WRITER

HOUSTON, Feb. 8

FIRST crude oil outlet facilities from the southeastern New Mexico division of the Permian salt basin region are to be provided by The Texas Pipeline Co., through a 25-mile northerly extension of its West Texas-to-the-Gulf trunk system.

Pipe for the extension line is already on the way and construction will be pushed, so that operation can begin shortly after completion of the combination 10-inch and 12-inch trunk system this spring. The extension line will be of 10-inch pipe, connecting the present terminus of the trunk system in Winkler county, Texas, with wells in the vicinity of Jal, New Mexico, sec. 20-25S-37E.

The Texas Co., parent organization of the pipeline, has two wells in the Jal area that are capable of several hundred barrels daily production at present. Other companies operating along the subsurface lime ridge extending northerly out of Winkler county, Texas, also promise to develop wells of major producing importance in the future.

Two wells of The Texas Co. now capable of production are its Lea county discovery, No. 1 Rhodes, good for about 100 barrels daily, and the No. 1 Sheppard, three miles south of Jal, owned jointly with the Amerada Corp., and the Columbia Carbon Co. The last mentioned well made about 175 barrels daily when recently tested.

Skelly Oil Co.'s previously reported No. 1 Joyner, two miles west and a little south of Jal, appears to be the best completion in the southern Lea county area. It is now estimated good for about 1200 barrels daily. Other tests in the area, most of them high on the structure, where they produce mainly gas, have outlined the territory broadly in a geological sense, indicating important flush oil production as drilling proceeds.

South across the New Mexico boundary, in the Leck-Daugherty area of northern Winkler county, Texas, the Magnolia Petroleum Co. is connecting with the newly completed Warner-Quinlan well in sec. 3, block 74, which tested 60 barrels an hour on completion at 3105 feet. About a half dozen wells, most of them making varying percentages of water, have been completed in the Leck-Daugherty area since last summer. This area is nine miles north of original Winkler production.

The Magnolia, which has served the older Winkler area since last spring, built a 4-inch pipeline lateral to the Warner-Quinlan well from its tank farm in sec. 6, block B-11.

Field operations in the Permian salt basin were generally lacking in significance throughout the week. Pecos county, however, again demonstrated its ability to produce high flush wells when the Mid-Kansas & Transcontinental partnership completed C-12 Yates, testing 2502 barrels in an unofficial 30 minutes gage.

Simms Buys Red Bank's Pecos Property

HOUSTON, Feb. 7.—Red Bank Oil Co.'s 140-acre M. A. Smith lease in Sec. 24, I&GN block 194 of the Yates field, Pecos county, has been sold to the Simms Oil Co., Dallas, for a consideration of between $300,000 and $400,000. Included in the deal are five producing wells with potential production based on prorating gages of approximately 5000 barrels. Homer T. Lamb of Tulsa is president of the Red Bank, with whom President E. T. Moore of the Simms company completed the transaction.

Gypsy Gets Huge Misener Sand Well; Remainder of State Quiet

By John Power
N. P. N. STAFF WRITER

TULSA, Feb. 9

BE THE Mission pool what it may, the Misener sand area in the western part of Twp. 8N-5E held the center of the stage this week. While the title of the biggest well in the state is a fleeting one, the Gypsy Oil Co. No. 3 Miller, in the SE NE SE of 18-8-5, wears the crown without a real challenger, for the time being, at least. This Misener sand area, stretching from Sec. 6 south to about the center of Sec. 19, twp. 8-5, is known, together with the Wilcox sand production in the central part of the area, as the Maud pool. Misener sand oil, however, makes up by far the major portion of the field's production.

The new Gypsy producer topped the Misener sand at 4026 feet, pipe having been run just above this formation. The hole was loaded with water to make easier the handling of the high gas volumes which often accompany production in the field. After being bailed a little, the well blew itself in, and although preparations had been made to handle a good sized well, after a few hours of production which mounted as high as 940 barrels an hour, the producer got out of control, distributing several thousand barrels of oil over the country-side. The actual gage the first hour was 715 barrels, and 827 the second hour. Along with the oil the well was producing some 20 to 30 million feet of gas per day. Friday morning's gage on the well was 8,437 barrels of oil in the tank, with an estimated 4,000 barrels more on the ground. By Friday afternoon the well had settled to a steady production of about 370 barrels an hour, and was completely under control, all production going into the tanks.

The huge producer establishes comparatively little more territory. It is three locations east of production and two north. Since the Gypsy's well was completed the Phillips Petroleum Corp. drilled in its No. 1 Wallace, an east offset to the Gypsy's big well, but without any such startling results. The Phillips producer, which topped the Misener at 4013 feet, is making about 100 barrels per day, along with 2,000,000 feet of gas, from a present total depth of 4017 feet. It is expected to make a much better well when deepened, as it will be shortly.

This Misener sand is getting to be quite an oil producing zone in this area.* Lumped with a little Wilcox production in the central part of the township, the field is now making about 40,000 barrels of oil per day from 56 wells. By far the biggest part of this is Misener sand oil. Several other good wells were added to the list during the week. Independent Oil & Gas Co. has a good one in its No. 3 Harding, SW SE NW of 18-8-5, which made better than 1800 barrels initial production from the Misener topped at 4198 and drilled to 4222. The No. 2 well on the same lease, located in the NE SE NW of the same section, is an even better well, making 2325 barrels in 24 hours after drilling 35 feet of Misener sand topped at 4095 feet. An increase at the rate of 300 barrels per day came from the last 10 feet of pay drilled. Pure Oil Co., which discovered the pool late last summer, added another nice well to the roll of producers with its No. 4 Wiley, which flowed at the rate of 1962 barrels in 16 hours after drilling the Misener from 4037 to 4045 feet. No important additions to producing territory are proven by any of these wells other than the Gypsy's big one.

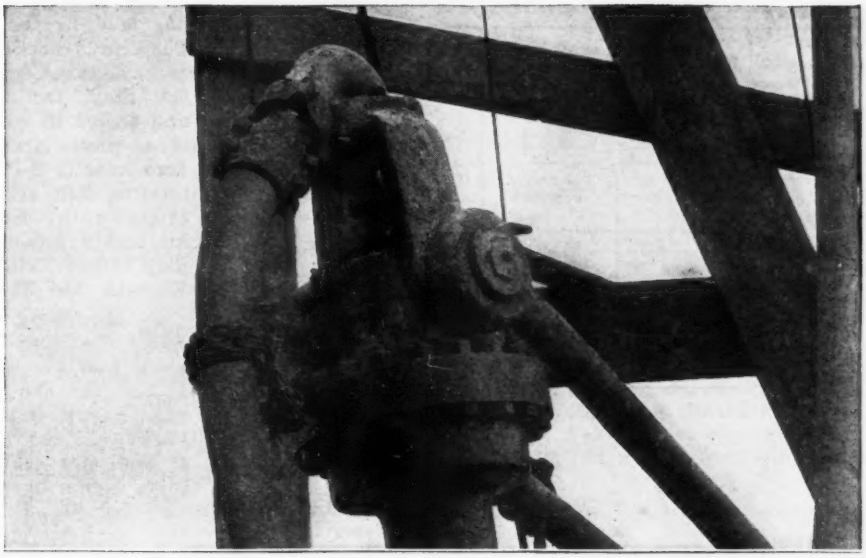
In many places in the field where the Misener sand thins out, the Hunton lime, lying immediately beneath it, takes up the producing burden. There are several fair combination wells in the field. The Texas Co. and the Tidal Oil Co. both completed wells of this character during the week. The Texas Co. No. 3 Calvin, in the NW NE SE of 7-8-5 is flowing better than 500 barrels per day from the Misener, topped at 4124, and the Hunton, topped at 4129, and penetrated a short way. The well is cutting its production two per cent, however. The Texas Co. No. 4 on the same lease, in the SE NW SE of the same section, and offsetting the No. 3 to the west, has 2000 feet of water in the hole from the Hunton encountered at 4083, and drilled to 4086. Tidal Oil Co.'s producer, its No. 1 Everretts, SE SW SW of 18-8-5, is another combination producer, making nearly 600 barrels of oil per day from the Misener at 4193 and the Hunton, at 4198 to 4238 feet.

Wilcox possibilities under the Misener sand do not appear very bright at present, though if the Misener holds up to some of the initial production that it has been recording there will be no need of the deeper pay. A few edge wells, particularly on the north side of the field have been drilled to the Wilcox, getting water in each case. The Slick-White Eagle wildcat on the southeast edge of the field, is now another failure in the Simpson, and will probably be one in the Wilcox, having a hole full of water in the Simpson at 4468 feet. Although a failure in the Simpson, this test, in the NW SE of 20-8-5, is a small producer in the Hunton lime, extending the pay area in that formation about half a mile southeast.

Disappointments come more often than good wells in the Wilcox section of the Maud pool, which lies about mid-way between the Mission pool and the Misener sand area. In Sec. 14, south of the discovery Wilcox well, there have been five wells drilled, with but one producer in the district. This is the Barnsdall Oil Co. No. 1 Fife which offsets the discovery to the southwest. On the same lease, the No. 3 well, in the NW SE NW of 14-8-5, is a Wilcox water well, after drilling the sand from 4352 to 4355 feet. When the Hunton lime was drilled through in this well it was bradenheaded, making one flow of seven barrels. The hole has been plugged back to 4275 feet, and this formation, which was logged between 4188 and 4210 will be tested.

THE Wilcox sand area west of the Allen pool, at the point where Hughes, Pontotoc and Seminole counties join, is not yet ready to be thrown in the discard. The northwest offset to T. B. Slick's dry hole, drilled by the Sinclair Oil & Gas Co. in the SE NE SE of 23-5-7, is flowing better than 750 barrels daily from the Wilcox encountered at 4175 and drilled to 4183 feet. It will probably be deepened before long. Opinion of some is that the field, if any, is divided into two parts, with the first Wilcox well in the district, the Sinclair's producer in SE NE SW of 7-5-8, on the west edge of a Wilcox sand pool which underlies the present Cromwell sand production of the Allen field, and a second area, extending almost due north from the Sinclair's new well, and underlying the Cromwell sand gas wells a couple of miles north-

*See map, page 40, Feb. 6 issue.



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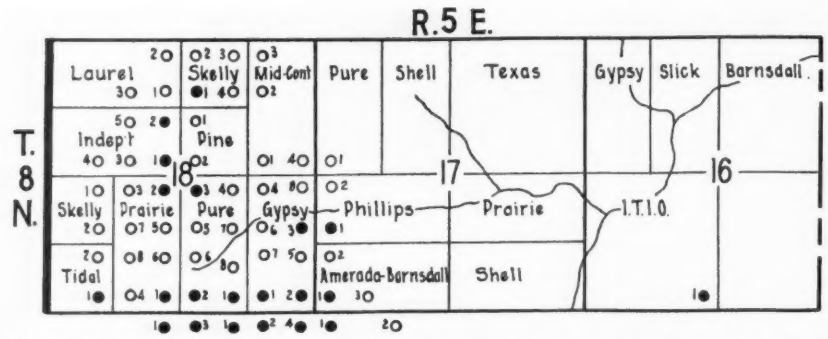


The Gypsy Oil Co. No. 3 Miller is the largest well in the state, for the time being at least. The big well, in the SE NE SE of 18-8-5, *topped the Misener sand at* 4026. *Production the first hour was* 715 *barrels, mounting to a peak of* 940 *barrels per hour. The Phillips Petroleum Co., well which offsets the Gypsy's to the east, is so far good for but* 100 *barrels a day, although it may improve with deepening*

ward. There is, apparently, a fault between the two, as the new Sinclair well picked up the Wilcox more than 150 feet higher structurally than did the Slick failure offsetting it to the southeast.

The rest of the Seminole district passed a quiet week. The extremely bad weather has handicapped operations to a large extent. The Mission pool, held under restraint by the drilling agreement, furnished little news of a producing nature. Gypsy Oil Co., which owns most of the acreage in the field, has another well on top of the sand and shut down with a hole full of oil. It is the No. 6 Barkus, in the CEL SE NW SW of 6-8-6. Top of the Wilcox is reported as 4638, with the well shut down at 4642.

Although not in the Seminole district itself, of importance to Seminole operators is the big gas well completed in Hughes county by the Independent Oil & Gas Co. This well, the No. 1 Harjo, in the NE NW NE of 7-8-9 has 70,000,000 cubic feet of gas per day from the Cromwell sand at 3347 to 3351 feet. The well, which is about a mile and a quarter from the nearest production, is completely under control, the Tristate Gas Co., subsidiary of the Independent, being connected to the well. Tristate is one of the principal purveyors of gas to the operators in the Seminole district, and this big well will relieve any gas shortage in the Mission and Maud areas.

Over Oklahoma City way there is little new to report, although there are two wells which will soon be at interesting depths if not shut down by the cold weather or other unforeseen circumstances. The discovery well of the Indian Territory Illuminating Oil Co.-Foster Petroleum Corp., southeast of the City, is still doing a fine job of producing, output having declined but 200 barrels since it was first deepened. It is now making about 5,400 barrels daily of pipe line oil, against from 70 to 90 pounds back pressure.

For Kansas, the general area north of Wichita is still the main attraction. Recently, however, Marion county, just north of Sedgwick, has become the scene of the hottest part of the trading, operators in the Wright pool being more concerned with developing what acreage they had. The Marion county play was started some time ago, when Courtney B. Davis et al., of Wichita completed a small gas well, which also made a little oil, in the SW NW of 7-19S-3E. The pay was the chat on top of the Mississippi lime, possibly the same horizon from which the big Marland Production Co. No. 1 Goodrich, in Sedgwick county, is producing. Empire Oil & Refining Co. offset the Davis well to the west, getting but a small show in the chat. The well was deepened through the Mississippi lime to the pay beneath, found at 2845 feet in which it made a 250-barrel pumper. This pay, which is supposedly the same as that from which the Wright pool is producing, is in the Ordovician section, being called variously the Viola, Simpson, dolomitic Simpson, Wilcox, and silicious.

Shell Petroleum Corp. drilled a diagonal southeast offset to the Empire well, going to the same pay below the Mississippi lime, getting a well which is swabbing better than 700 barrels daily. The Shell producer had the pay at 2803 to 2815. No water has appeared in the Shell's well, which was not the case in the Empire well, which had to be plugged back two feet on account of water intrusion. Several locations have been made in the district, the Empire moving in on two, one a north and one a west offset to the Davis well, Davis is deepening his original well, and starting another, one location to the north. Darby Petroleum Co. has a well which is reported to have 1,500 feet oil in the hole from the pay on top of the lime, which it is said to have topped at 2418 and penetrated to 2421 feet.

There have been several lease trades in the area, close in acreage bringing fairly good prices, even under the present depressed conditions in the industry. Courtney Davis, whose acreage holdings were large, has sold to the Amerada Petroleum Corp. a tract of 160 acres in 13-19S-2E, three quarters of a mile from the play, for $40,000 dollars cash, and $8,000 in oil. Empire has bought three pieces from Davis, one an 80-acre lease in 6-19S-3E, and the others, totaling 240 acres in 18-19S-3E, for $75,000 cash. Empire has also bought an eighty one-half mile east of the play from Ritchie and Moore of Wichita for $300 per acre.

In the Wright, or Valley Center pool, the only completion of the week was the Hays & Reynolds No. 1 Roll, in the SW NW NE of 7-26S-1E, which is good for about 350 barrels in the pay at 3374 to 3398. It does not establish any new territory, being in the trend of production between the discovery well and the northern end of the field.

* * *

Notes on the Week

Russell et al. No. 1 Houston, a Stephens county wildcat in the NE SW SW of 12-1S-7W, tested and found wanting a sand at 2324 feet. Pipe will be lowered to shut off the water found in the sand, and drilling resumed.

* * *

Ellis county, Kansas, is getting quite a wildcat play. Another test with a good showing of oil is reported from the county in Davis, Hazlett, et al. No. 1 Wieland, NE 1-13S-16W, which had the top of the Oswald lime at 3004 feet, and filled up 1000 feet with oil in one hour from a total depth of 3,014.

* * *

Near the Searight pool of the Seminole district Mid-Continent Petroleum Corp. has 8,000,000 feet of gas daily in its No. 6 Saloche, which topped the Hunton, at 4075 feet. Drilling is being continued in spite of the gas.

* * *

Mid-Kansas Oil & Gas Co., subsidiary of the Ohio Oil Co., has purchased the holdings of the Ramsey Petroleum Corp. in the Oklahoma City field. The acreage consists of three tracts, totaling 290 acres, in the heart of the present play. The consideration was not made public, though it is understood that the Mid-Kansas will take over the present two drilling wells, assuming the expense from the start of the development. One tract is about half a mile northwest of the discovery well, and the others are three quarters of a mile west and a mile and a half northeast respectively. The Mid-Kansas is to open an operating office in the capital city.

* * *

Prairie Pipe Line Co. deliveries for January totaled 5,914,554.59 barrels, or 60,710.41 less than was delivered in December. The figure was slightly higher than the amount for the same period a year ago, when deliveries were 5,394,759.12 barrels.

Our Industry—A Page of Facts and Personalities

By Paul Wagner

National Petroleum News

Houston

It frequently happens in oil field practice that, when unscrewing sucker rods a considerable twist will be taken up before the joint lets go. If while the twist is on the rod the operator thereof accidentally lets go of the handle of the tongs it will fly around like a flail. Therefore, a safety measure has been installed by Superintendent Giboney of the Associated Oil Co., at Coalinga, Calif., which prevents danger to workers on a well. It is a circular wrench, which looks something like a wagon wheel when it is installed. If it gets away and starts to turn the wrench simply acts like a wheel with a smooth rim. The most serious injury that can result from its use is a broken or badly bruised finger.

* * *

David D. Pickrell of El Paso is in charge of the natural gas pipeline project, now under construction, which will connect the Lea County, New Mexico, territory with El Paso. A 205-mile pipeline to handle approximately 35,000,000 cubic feet of gas daily is being built by the El Paso Natural Gas Co. Industrial consumers will be served and deliveries made to the Texas Cities Gas Co., for domestic distribution in El Paso.

* * *

H. W. Penterman, formerly of Tulsa, is now in charge of the Houston office land department of the Shell Oil Corp., succeeding Walle Merritt, transferred to California. Mr. Merritt assumes similar duties for the Shell at Los Angeles. He had been in charge of the Houston land department for the last five years.

* * *

Ed R. Perry, chairman of the board of the Superior Oil Corp., and president of the Exploration Co. of Texas, has added another executive title to his list. He is the newly elected president of the Hemisphere Oil Co., operating in Wilbarger county, Texas. Directors of the Hemisphere include Thomas R. Cowell, formerly vice president of Transcontinental Oil Co., and J. G. Farquhar, vice president and treasurer of Plymouth Oil Co. Mr. Perry was vice president and general manager of Cosden & Co., before its reorganization into the Mid-Continent Petroleum Corp.

* * *

Clarence Hall, recently of Houston, has returned to Marshall as district manager of the Dixie Gas & Fuel Co., in east Texas. Announcement to that effect is made by Major B. A. Hardie, vice president and general manager of all the Moody-Seagraves gas interests, which include the Dixie Gas & Fuel Co. H. P. Carroll is in charge of Sabine district offices at Beaumont.

* * *

A. T. Junk, purchasing agent of the Continental Oil Co. of Texas, makes his headquarters at Wichita Falls, where he is widely known. Although his company is principally active in the Greater Wichita Falls district it operates also in Oklahoma and Arkansas. Besides producing properties it also operates a refinery in the Wichita Falls territory. It is a subsidiary of Continental Oil Co. of Denver.

A. T. Junk

* * *

All kinds of engineering are necessary in the operation of an oil company. That was apparent from the beginning of development in the Ventura field, California, by the Associated Oil Co. Because of mountain topography, it has built more than 25 miles of oil or oil macadam roads on a 4000-acre Ventura property since 1920. In many places the grades reach the maximum allowable of 10 per cent. Road building has not been all the engineering necessary under Supt. M. Mears and Earl W. Edson, resident engineer; they have also had to supervise excavations for derrick locations.

* * *

Joe Zeppa, formerly secretary of the Arkansas Natural Gas Corp., at Shreveport, has accepted a vice presidency of the McMillan Petroleum Co., with Los Angeles headquarters. He had been secretary of the Arkansas Natural Gas Co. since its merger about a year ago with the Natural Gas & Fuel Corp., of El Dorado, Ark.

* * *

Charles E. Devine of the Mexican Gulf Oil Co. returned to Tampico headquarters in January after a five weeks vacation spent in California.

* * *

W. H. Hoffman, formerly superintendent of the Pryse works of The Texas Co., has been transferred to Wyoming, where he will be general superintendent over the Casper, Craig, Cody and Sunburst refineries.

* * *

Bert Aldrich is now chief engineer of the General Petroleum Corp., in the Lost Hills territory of the San Joaquin Valley. He was formerly at Continental station of the General pipeline at Taft, California.

* * *

A. K. Riddle of the Shell Pipeline Corp., who is supervising construction of a 10-inch pipeline from McCamey, West Texas, to Houston, is making his headquarters at Austin temporarily. He formerly lived at Cushing, Okla.

New Peak for Santa Fe Springs Expected Next Summer

LOS ANGELES, Feb. 9

EVERY time the executives and engineers of the larger oil companies in California reach a solemn decision on what they think they can expect of Santa Fe Springs during the coming 12 months, the apple cart is overturned by the discovery of a still deeper oil sand or sands, and they must once more get their heads together and make new estimates.

Previous estimates had been that a peak in production would be reached in February, probably around 225,000 barrels a day for a week, with an average of close to 200,000 barrels daily for the month. This estimate still holds, but it is now indicated that the discovery of new deeper producing zones will bring about still another peak, probably in June or July, but so far no one will hazard a guess as to what the new peak will be.

Three wells at Santa Fe Springs during the past week have found deeper sands, and the deeper zone wells are more than a mile apart. Whether the three wells have all penetrated the same deeper zone is still an open question, with many firm of the opinion that the three wells have found two distinct oil sands. The first well finding a deeper zone was Geo. F. Getty's No. 17, located with one block of the Wilshire well which discovered the Buckbee zone and within two blocks of the Four Corners. This well found the top of the new zone at 6305 feet, and drilled to about 6565 feet, most of which was good oil sand, according to the cores. Pipe is being cemented at 6350 feet, in a shale body, and a test will be made within the next ten days.

The second well to find a deeper pay strata was Associated Oil Co.'s Clark 2, 4000 feet due west of Four Corners near the present eastern edge of the Meyer zone. This well picked up an oil sand at 7320 feet and penetrated 50 feet of oil sand before passing into a gray sand. The well is still drilling in gray sand at the close of the week.

The third well to find the deeper oil sand was Richfield Oil Co.'s test on the Elliott tract approximately 3000 feet slightly north of east of Four Corners, picking up the first oil showing at 7165 feet. On Friday this well was drilling slightly below 7170 feet and was still in the oil sand. The hole will continue down until sufficient sand has been penetrated for a test or until the drill passes into some other formation.

The opinion is now being freely expressed that the new deep zone or zones will be of approximately the same area of the Meyer zone, or about 1600 acres. The present deep sand, Buckbee zone, has been fairly well defined to cover an area not to exceed about 800 acres, or about one-half the area of the Meyer. It is also indicated that further deep drilling will call for holes ranging in depth from 6500 to 7500 feet and there are few holes in the field in proper condition to drill this deep. This means that many of the holes drilled to develop the new deep zones must start from the grass roots, thus delaying the production peak.

It is thought that some 15 to 25 holes in the field can start for the new zones as soon as there is sufficient information at hand to justify. There is a chance that a least one well and maybe two can make tests within ten days. The showings of these tests will then give an idea of what can be expected. But there is no doubt in the minds of anyone that a renewed drilling campaign is in sight.

All indications this week pointed to discovery of a new light oil field in Santa Barbara county, when Continental Oil Co. ran into a very rich gas sand at 3990 to 3996 feet in the test it is drilling at Carpenteria, 12 miles east of Santa Barbara and on the coast, between the ocean front and the highway. The pressure was so strong that it was necessary to get a supply of hematite from Elwood and mix with the mud. The generally accepted report is that officials of the Continental are firmly convinced that they have a well and have ordered flow tanks to be set up at once and arrangements made for six new wooden derricks. Officials of the company Friday refused to confirm or deny the tanks and derrick report.

Continental holds in a large body 1500 acres surrounding the new well and it is generally understood and believed that Continental will have a field all its own, if the test proves to be an oil well. It is expected to be light oil as the formation is similar to that found at Elwood where oil of 38 gravity is being produced. Naturally offset acreage is being taken or is held by other companies, but it is not thought any of the offset will be productive.

Information from Elwood this week was to the effect the Rio Grande-Barnsdall wells, six in number, were showing their first production decline. The wells held up so well that the oil fraternity was suprised. Recent reports from the field indicated that the six wells were averaging close to 23,000 barrels a day or a well average of close to 4000 barrels. It is still indicated that the Rio Grande-Barnsdall combine holds all of the productive territory at Elwood. The Elwood Consolidated well, some 3½ miles northeast of the Elwood field picked up a likely looking sand around 3290 feet and cores for more than 15 feet indicated an oil producing zone. Casing is to be cemented for a test. This territory is badly "chopped" up according to geologists, and the well may have some of the formation found at Goleta, which did not pan out, or rather wells produced only a small amount of oil before quitting.

At Lawndale, 35 wells were drilling Feb. 6, in addition to 12 rigging up and 18 rigs and locations. Only four new locations were announced last week. Twelve wells are drilling below 3000 feet, of which three are below 4500 feet.

Drilling will be slow after passing the 5000-foot mark, as cores will be taken constantly from then on. It became known this week that Shell Oil Co. had arranged to build a pipe line into the field at once to take oil from the well now on production. It was necessary for Shell to build only a mile of line as its Inglewood line runs within a mile of the field. Standard Oil Co. has a trunk line directly through the field and can cut in when there is any oil to be taken.

AT SANTA FE SPRINGS, 165 wells were drilling at the close of the week, in addition to 20 shut down wells and 20 rigs. The 77 producers in the deep or Buckbee zone were flowing at the rate of 2200 barrels to the well. Flush production last week amounted to about 40,000 barrels, but the field increased around 12,000 barrels only.

Long Beach reports 150 drilling wells, with a few completions each week. One well completed early in the week west of American avenue indicates that there is still development work to be done in the Northwest Extension, and drilling can be expected to continue at Long Beach through most of this year, with a relatively small decline from month to month in production.

Promoters Foiled Again In Texas Program

HOUSTON, Feb. 9.—North Texas promoters were foiled again, Feb. 8, when the lower house of the Texas legislature voted to table a resolution of Representative A. E. Harding of Fort Worth asking congress to investigate federal prosecutions of so-called independent oil operators.

The committee on federal relations had previously voted down the resolution.

Representative J. C. Duvall of Fort Worth, rising on personal privilege

after the resolution had been voted down on the floor of the house, apologized "for a Tarrant county man ever having attached his name to such an instrument as this."

Duvall charged the resolution had reflected on the integrity of the governor and other state officials, including the house federal relations committee.

Harding was on his feet quickly with a denial of the charge, whereupon Duvall retorted that "if the house had gone behind the motives of the resolution the gentleman who introduced it would not be in his seat here today."

Speaker Barron had sustained a point of order against language used by Harding, who charged the committee's action was one of the "most outrageous and dirtiest treatments ever accorded witnesses in this legislature."

Promotion interests testifying at the committee hearing were described by Representative Grady Woodruff, speaking on personal privilege, as directing insults "by direction and innuendo" at various officials.

"The men that testified," Woodruff said, "evaded questions and would not sustain their allegations, stating they had no immunity from criminal prosecution and would not give the full facts they claimed to have knowledge of . . . It would have been foolish and asinine for the committee to have wasted further time."

NEW YORK, Feb. 9.—Cities Service Oil Co. has bought the Commonwealth Oil Co. of St. Louis with 11 service stations.

Winkler Pumping Problems Studied by Engineers

Staff Special
HOUSTON, Feb. 7

COMPLEX pumping problems of the Winkler area, west Texas, will come up for discussion at the Dallas meeting, April 3-4, of the Texas-Louisiana-Arkansas district of the American Petroleum Institute Division of Development and Production Engineering.

Because the majority of the existing pumping wells are producing under conditions of agitated flow it has been found extremely difficult to compile accurate lifting costs for normal pumping. Too, the effects of prorating practice and group production have prevented the platting of typical decline curves, which would allow reasonably accurate appraisals of the probable life of the field.

Conditions found in the pay horizons of the Winkler area add to the complexities of field studies. In parts of the territory the pay is highly shattered and, consequently, of great porosity. Elsewhere, the pay is denser and, therefore, less porous.

Field studies have shown that wells of large initial production in the shattered, or porous, areas produce large quantities of water soon after completion. Many such wells probably will flow until a stage is reached when their oil production is almost exhausted, due to the natural water drive of Permian basin structures providing hydrostatic pressure.

Although wells of the type mentioned will require no pumping equipment, many others probably will have producing life of three to ten years on the beam, yielding varying proportions of oil and water.

It was a background such as this that confronted a committee of A.P.I. engineers who recently attempted to appraise pumping conditions in the Winkler area. Their report, which will come before the Dallas meeting for discussion, has been withheld from publication in detail, until the time of the April symposium.

The delay will give time for the development of additional details bearing on the general conclusions reached by the field committee composed of J. A. Holmes, J. C. Gordon, T. W. Rhoads, and B. L. Moore, representing, respectively, the Southern Crude Oil Purchasing Co., Pure Oil Co., Gulf Production Co., and Humble Oil & Refining Co.

LOS ANGELES, Feb. 8.—W. E. Dunlap, assistant production manager and chief geologist of the Richfield Oil Co., has been appointed production manager to succeed John McKeon who recently resigned to engage in production independently. Mr. Dunlap was in the geological department of the General Petroleum Corp. before joining Richfield.

Seminole District Production, February 7, 1929

Mission Field

Company	Lease	Location	Wells	Production
Amerada	Rice	5- 8-6	1	0
Carter	Fuswa	18 -8-6	1	50
Carter	Micco	8- 8-6	1	50
Gypsy	Baby	6- 8-6	1	15
Gypsy	Barkus	6- 8-6	2	0
Gypsy	Dosar	7- 8-6	1	292
Gypsy	Hardy	7- 8-6	1	0
Gypsy	Mission	5- 8-6	1	0
Gypsy	Mosar	1- 8-5	1	0
Marland	Maines	7- 8-6	1	150
Mid-Kansas	Moore	7- 8-6	1	150
Shell-Marland	Herndon	7- 8-6	1	0
Shell-Papoose	Maines	7- 8-6	1	0
Twin States	Haves	8- 8-6	1	50
Total			15	757

SUMMARY

Field	No. Wells	Prod. Feb. 7	Prod. Jan. 31
Little River	323	100,584	102,182
Maud	56	46,610	36,325
Mission	15	757	625
Bowlegs	311	42,024	42,241
Earlsboro	296	64,398	67,382
Seminole	281	39,097	39,379
Searight	69	8,954	9,615
St. Louis	304	126,307	130,882
Total	1,655	428,731	428,631
Average per well		259 bbls.	260 bbls.

Completions in California, Week Ended February 2, 1929

Long Beach

Company	Well No.	Location	Depth	Init. Prod.
Dabney-Johnson	No. 20	....	6809	150
Dabney-Johnson	No. 21	....	6253	1000
Shell Oil Co.	Andrews 8	....	7000	1000

Santa Fe Springs

General Pet. Corp.	No. 227	....	5886	3500
General Pet. Corp.	No. 177C	....	5866	4000
General Pet. Corp.	No. 178B	....	5288	2500
General Pet. Corp.	No. 209	....	5881	2800
General Pet. Corp.	No. 226	....	5843	4200
General Pet. Corp.	No. 77A	....	5288	2500
Geo. F. Getty	Mitchell 23	....	5880	5600
Graham Loftus	No. 1	....	5901	3200
Shell Oil Co.	G.H.N. 16	....	5795	1500
Standard Oil Co.	Walker 15	....	5782	1000
Union Oil Co.	Alexander 10	....	5750	800
Wilshire Oil Co.	Peterson 1A	....	5855	800

Seal Beach

Company	Well No.	Location	Depth	Init. Prod.
Standard Oil Co.	San Gabriel 4	....	4936	675

Ventura Avenue

Associated Oil Co.	V. L. & W. 7	....	7140	160

Elwood

Rio Grande-Barnsdall	Bell 5	....	3373	5500

Fruitvale

Andrews Lucas	Bell 1	21-29-27	4014	300

Mt. Poso Creek

Reynolds O. & G. Co	No. 1	6-28-29	1576	800

Completions in Oklahoma and Kansas, Week Ended February 9, 1929

OKLAHOMA

Carter County

Company	Well No.	Location	Depth	Init. Prod.
Boring et al	5	SEc NW SE NW 10-4-2 W	T.D. 3145	Dry

Comanche County

Magnolia	5	NEc SE SW NE 30-2-9 W	T.D. 2655	Dry

Creek County

Dixie	5	SE SW SE 7-19-9 E	2084-2099	2M
Baker-Lynch	2	CSL NE NW 4-18-12 E	2043-2056	3M
Magnolia	1	SEc NW SW 6-17-7 E	2853-3875	15
Tibbens	2	CEL NE NW 9-14-10 E	3159-3169	30

Grady County

Okla. Gas Utilities	5	NEc SW 23-5-8 W	1938-2300	26M

Kiowa County

Bridwell et al	1	NEc NW NW SE 18-6-16 W	443-456	25

Lincoln County

Wilcox	2	SW SE SW 35-14-6 E	T.D. 4361	Dry

Marshall County

Thompson et al	1	SW SE SW 3-6-6 E	T.D. 830	Dry

Muskogee County

Jolly	1	SEc SW SW NE 30-15-15 E	T.D. 2121	Dry
George	1	CEL NE SW 5-13-16 E	T.D. 2001	Dry
Paschall	1	SWc NE SW 18-13-19 E	T.D. 980	Dry

Okfuskee County

Josey	18	SW SE NW 33-12-11 E	T.D. 3738	Dry
Tidal et al	1	SEc NE NE 30-12-9 E	3945-3975	15M

Okmulgee County

Wallace	5	CSL SW NE 14-14-14 E	1698-1742	40
Moffett-Buckles	2	CNL NW SE 16-11-12 E	1250-1300	.5M

Osage County

Carter	1	NWc SE 34-26-6 E	2868-2901	239
Phillips	17	NW SW SE 21-25-12 E	1615-1711	15
Marland-Gypsy	2	NE SW NW 22-24-7 E	2468-2500	11M
Silurian	53	SE SW NE 17-23-12 E	1589-1597	10
Pioneer	8	SW NE SW 5-20-11 E	1734-1744	30

Payne County

Skelly	1	NEc SE 6-17-4 E	T.D. 4275	Dry

Pontotoc County

Ramsey	4	NE SE NW 19-5-8 E	2565-2628	550
Dixie	1	NEc SE 1-4-7 E	2004-2018	35

Pottawatomie County

Magnolia	1	SE SW NW 17-7-4 E	4365-4400	252
Magnolia	5	SE SW SE 24-7-4 E	4440-4451	212
Sinclair	5	SW NW SW 24-7-4 E	4309-4345	2130
Pure	4	CSL NE NE 26-7-4 E	4210-4246	4200
Sinclair	2	CSL N½ NE 26-7-4 E	4173-4209	1985
Magnolia	1	SWc NW 28-7-5 E	4310-4395	73
Magnolia	1	SW NW SE 1-7-5 E	T.D. 4905	Dry

Seminole County

Pine	1	SWc SE 32-8-7 E	T.D. 4754	Dry
Gypsy	1	SEc NE 10-7-6 E	T.D. 4423	Dry
Mid-Continent	2	SE NE SE 23-7-6 E	T.D. 4300 OWD	Dry
Magnolia	1	SE SW SE 32-10-6 E	4356-4368	704
Sinclair	2	SE NE SW 7-5-8 E	4158-4174 OWD	1850

Stephens County

Hanbury	8	NWc SW SW 27-1-8 W	2195-2200	50
Ven Mex-Mid-Continent	4	NEc NW NE NW 3-2-8 W	1646-1659	150
American	3	NWc SE NW 34-1-8 W	T.D. 2230	Dry

Wagoner County

Cody-Neely	1	SEc 7-17-18 E	T.D. 800	Dry
McCracken	7	C SE NE 21-18-17 E	825-828	3M
Finefield	5	SE NW SW 22-16-19 E	886-894	13
Public Service	1	NWc SW 36-16-17 E	768-778	6.5M

KANSAS

Butler County

Trees	1	NW NE NE 11-25-4 E	T.D. 2825	Dry
Paul et al	1	CSL SE SW 31-26-6 E	T.D. 2804	Dry

Cowley County

Empire-Marland-Twin State	1	NWc NE 36-32-5 E	T.D. 3546	Dry
Kentucky	1	NEc SW SW NE 13-34-6 E	1112-1117	1.5M

Elk County

Wahn et al	1	NE NW NE 27-31-10 E	T.D. 1710	Dry

Ellis County

Marland	1	SWc SE 27-11-19 W	T.D. 3842	Dry

Greenwood County

Syndicate-Phillips	2	SW NW NE 35-23-11 E	T.D. 1927	Dry
Sheedy et al	9	SE SW NW 11-23-9 E	2331-2376	15
Simmons-Rhodes	3	NE SW SW 29-22-13 E	1685-1713	175

McPherson County

Newman et al	1	NWc NE 2-17-1 W	T.D. 3534	Dry

Russell County

Wilcox	1	NWc 4-14-15 W	3047-3100	60

Sedgewick County

Bu Vi Bar et al	1	SEc 1-26-2 W	T.D. 3875	Dry

New Field Operations in Oklahoma, Kansas, Panhandle, North, North East Central, Laredo and West Texas, Week Ended February 9, 1929

OKLAHOMA

Beckham County

Company	Well No. Farm	Location
Martin	1-Porch	NWc 27-9-23 W

Creek County

Silurian	27-Starr	SEc NW NE NE 17-18-7 E
Wilcox	8-Harjo	SW SE SW 35-16-8 E

Hughes County

Yarnell Drlg	1.....	SWc NE 15-9-10 E

Jefferson County

Amerada et al	1-Majors	SE NW NW 35-5-7 W

Kay County

Leonard et al	1-Ballentine	SE NE NW 28-27-1 E

Kiowa County

Muth Bros	1-Terry	C SW SE 6-6-18 W

Muskogee County

Brader et al	1-Lovett	SWc NE 20-15-15 E
Flasco et al	1-Dean	SWc NE NW 7-13-18 E OWD
Colton-Lester	1-Parker	SW NW SW 25-12-19 E

Okfuskee County

Independent	2-Jacobs	NWc SW NE 22-12-11 E OWD
Tidal	1-Johnson	NWc SW 29-12-9 E
Schock	1-Holmes	CEL SW NE 29-11-11 E

Oklahoma County

Sooner Dev	1-Capshaw	SEc NW 23-11-3 W
McKeaver Drlg. et al.	1-Sampson	NEc SW 27-11-3 W

Okmulgee County

Prince	7-Adams	SEc SW NE 12-14-14 E
Wallace	12-Colbert	CNL NW SE 14-14-14 E
Selby	11-Conner	NWc 6-14-15 E
Amer. Maracaibo	1-Henry	NEc NW SE 27-12-12 E
Moffett et al	6-Hawkins	C SE 6-11-12 E OWD

Osage County

Superior	1.....	NWc NE 30-29-8 E
Texas	1.....	SWc 29-28-11 E
Minnehoma	4.....	NEc SW 11-26-8 E
I. T. I. O.	1.....	NEc SE 26-26-8 E
Amerada	2.....	CSL SW NE SW 5-24-8 E
Gray et al	4.....	SW SE SE 34-24-8 E
Gray et al	1.....	CNL NE 3-23-8 E
I. T. I. O.	404.....	NWc NE NE NE 32-23-9 E
Mathews	1.....	CNL S½ N½ NW 34-23-9 E
Mid-Kansas	4.....	NEc SE SW 36-22-8 E

Pawnee County

Company	Well No. Farm	Location
Pure	1-Loretta	NWc SE 35-20-6 E
Magnolia	1-Embry	SEc NW 26-20-6 E

Payne County

Hughes	2-Powers	NEc SW SW NW 10-18-5 E

Pontotoc County

Yarnell Drlg	1.....	C S½ NW 30-4-6 E

Pottawatomie County

Amerada-Barnsdall	3-Wallace	SEc SW 17-8-5 E
Amerada	3-Green	NE NW NW 20-8-5 E
Tidal	2-Everette	NE SW SW 18-8-5 E
Wilcox	5-Smith	NW NE SE 8-8-5 E
Texas	8-Calvin	SW NW SE 7-8-5 E
Empire	1-Smith	SW SE NE 8-8-5 E
Wilcox	4-Smith	SE NW SE 8-8-5 E
Gypsy	3-LeClair	SE SW SE 23-7-4 E OWD
Sinclair	6-Blandin	SE NW SW 24-7-4 E OWD
Gypsy	3-Roseman	SW NW NE 26-7-4 E
Shaffer	1-Tolon	NE SE SW 30-7-5 E OWD

Seminole County

Empire	5-Cluck	SE SW NE 11-8-5 E
Empire	6-Cluck	NE NW SE 11-8-5 E
Twin State	2-Ripley	NW SE NE 12-8-5 E
Twin State	3-Ripley	NE SE NE 12-8-5 E
Tidal	3-Nellie	SE NE SE 12-8-5 E
Shaffer	2-Weaver	SW NE NE 12-8-5 E
Shaffer	3-Weaver	SE NE NE 12-8-5 E
Sunray	3-Nitchey	NW SW NE 19-5-8 E
Carter	1-Barbee	SWc 4-8-6 E
Carter	3-Fuswa	NEc NW 18-8-6 E

Stephens County

Harris-McNeil	1-Pettigrew	SEc SW 11-2-5 W
Bunn-Marvin Drlg.	2-Williamson	NEc SW SE 12-1-6 W
Amer. Pipe Line	3-Nigh	NWc SE NW 34-1-8 W
Pelwin	1-King	SWc SE 22-3-9 W

Wagoner County

McCracken	5-Horner	NEc SW NE SW 21-18-17 E
Horner et al	2-Kidd	SEc NW NW 22-18-17 E
Public Service	1-Verner	NWc SE SE NE 35-16-17 E

KANSAS

Greenwood County

Morgan et al	1-Hendrickson	CEL SW NW 17-25-9 E
Simmons-Rhodes	4-Luthi	NW SE SW 29-22-13 E

(Continued on Page 55)

New Field Operations in Oklahoma, Kansas, Panhandle, North, North East Central, Laredo and West Texas, Week Ended February 9, 1929

(Continued from Page 54)

Harvey County

Company	Well No. Farm	Location
Jolly-Ogg	1-Schowalter	NEc 11-24-1 W

Marion County

Empire	3-Suderman	SW SE NE 12-19-2 E
Empire	2-Suderman	NE SE NE 12-19-2 E
Davis	2-Rample	NW SW NW 7-19-3 E
Shaffer	1-Melsher	SW NW NW 7-19-3 E
Darby	2-Nickel	NW NE SE 12-19-2 E

Osage County

Papoose	1-Evans	SW NW NW 34-18-14 E

Sedgewick County

Durham	1-Hodge	NE NW SE 36-25-1 W
Hackett-Van Derman	1-Kessler	SEc SW SW NE 36-25-1 W
Plains	1-School lot	NEc SE SE 36-25-1 W
Richards-Haun	1-Valley	C SWc NW NE SE 36-25-1 W
Robinson et al	1-Whitaker	SEc SW NE 36-25-1 W
Shaft Held & Youker	1-Kible	NEc NW NW SE 26-25-1 W
Bu Vi Bar et al	3-Goodrich	SEc SW SW SE 6-26-1 E
Bu Vi Bar	1-Byers	NEc NW SW NE 7-26-1 E
Bu Vi Bar et al	1-Rothfuss	NWc NE NW NE 7-26-1 E
Bu Vi Bar et al	1-Shawver	NEc NW 7-26-1 E
Bu Vi Bar et al	2-Shawver	SE NE NW 7-26-1 E
Producers	1-Jones	NW SE SE 31-26-2 E

TEXAS

NORTH CENTRAL AND EAST CENTRAL TEXAS

Anderson County

			Survey
Humble	1-Jones	.....	Roberts

Brown County

Phillips	3-DeBurk	Blk-648	Bell
Phillips	2-DeBurk	Blk-648	Bell
Cranfill-Reynolds	1-Moss	Blk-62	Fuggle
Humble	10-Byler	Blk-43	T&NO
McClung	1-Spivery Heirs	Sec-22	HT&B
Paramount	3-Mayes	Blk-609	Ross
Bruce	5-Shields	.....	Brown
Amer. Maracaibo	4-Cross	Blk-624	Kenney
Gore-Brown	3-Mayes	Blk-609	Ross

Cherokee County

Humble	4-Earle et al.	.....	Johnson

Coleman County

Eastland	1-Keiney	Blk-269	Cochran
Roth-Faurot	1-Golson	Sec-18 Blk-738	Murcock
Eastland	6-Morris	Sec-24 Blk-722	Webber

Jack County

Panhandle	2-Smith	Abst-256	Hughson
Harper et al	1-Leffel	.....	Hughson

Jones County

Marland	7-Mason	Sec-18 Blk-19	T&P
Roeser-Pendleton	4-Grayson	Blk-19	T&P

Limestone County

Riverland	1-Hancock	.....	Scott

Leon County

Ballard	1-Tubb	.....	De La Garza

Palo Pinto County

Shaw et al	1-Chestnut	Sec-40	T&P

Shackelford County

Roeser-Pendleton	11B61-Cook	Sec-61	ET
Tannehill	11-Mathews	Sec-58	ET
Tannehill	1-Norton	Sec-803	TE&L

Stephens County

Cooper et al	1-Compton	Sec-8 Blk-7	T&P
Lone Star	1-Brooks	Sec-54 Blk-7	T&P
Lone Star	2-Elliott	Sec-55 Blk-7	T&P
Root et al	2-Hitson	Sec-6	LAL

NORTH TEXAS

Archer County

Peacock	3-Williams	.....	Hand
Pandem	1-Widmayer	Blk-132	Harris
Texas	1-Lowrance	Sec-2 Abst-1171	EL
Gulf Prod	2-Ward Bros.	Abst-452	Tomlinson
Akins-Rayzor	1-Finley	Abst-325	Nails
McCarty	1-Wilson	Sec-22 Blk-6	ATNCL
Barkley-Meadows et al.	1-Wilson	Abst-646	Harritz
Reno	9-Wilmot	Abst-1044	SP
Hines et al	1-Helm	Sec-2 Blk-3	H&TC
Texas	1-Parkey	Sec-1	ATNCL
Freeman-Grebin	4-Hennig	Blk-21	Meade
Gose et al	1-Inman	Abst-693	McKimbs
American	2-Benson	Sec-1808	TE&L
Nicholson et al	1-Hudson	Abst-644	Saunders

Cooke County

Texas	5-Dennis	Abst-484	Hutchinson

Grayson County

McGregor-Jones	1-Coleman et al.	Abst-1311	Wright

Montague County

Bell et al	1-Gasten	.....	Baker

Wichita County

Humble	13-Taylor	Blk-81	KWVFL
Staley-Wynne	13-Kemp	Blk-82 Abst-139	H&TB
Riner-Bailey et al.	1-Michie	Abst-240	Netherly
Panhandle et al	5-Burnett	.....	Meade

Wilbarger County

Company	Well No. Farm	Location	
Fain-McGaha	AA-2-Waggoner	Sec-18 Blk-4	H&TC
Fain-McGaha	A-4-Waggoner	Sec-18 Blk-4	H&TC
Staley-Wynne	F-5-Waggoner	Sec-32 Blk-4	H&TC
McKenna	B-5-Waggoner	Sec-32 Blk-4	H&TC
Waggoner Ref	H-1-Waggoner	Sec-24 Blk-4	H&TC
Easter	A-3-Waggoner	Sec-24 Blk-4	H&TC
Lewis Prod	7-Waggoner	Sec-18 Blk-4	H&TC
Cosden	B-34-Waggoner	Sec-26 Blk-4	H&TC
Fain-McGaha	DD-2-Waggoner	Sec-39	MEP&P
Fain-McGaha	DD-3-Waggoner	Sec-39	MEP&P
Waggoner	1-Waggoner	Sec-18 Blk-4	H&TC
Kelley	1-Waggoner	Sec-23 Blk-4	H&TC
Staley-Wynne	1-Waggoner	Sec-39	MEP&P
Phillips	2-Waggoner	Sec-44 Blk-4	H&TC
Baker et al	B-11-Waggoner	Abst-461	Purnell
Robertson	F-3-Waggoner	.....	Purnell
Lewis Prod	8-Waggoner	Sec-18 Blk-4	H&TC

Young County

Gulf Prod	2-Alexander	Blk-22	Meade
Bradstreet	2-Snider	Abst-1276	Wilson
Bradstreet	3-Snider	Abst-1276	Wilson
Holbrook-Woods	5-Watson	Blk-22	YCSL
Steed-Gans	12-Snider	Abst-1276	Wilson
Wise-Jackson	5-Calvin	Abst-240	Rohus
Rathke-Panhandle	13-Prideaux	Abst-240	Rohus
Riggs-Oliphant	1-Prideaux	Abst-274	Tynes
Walton et al	2-Prideaux	Abst-274	Tynes
Pennell-Bratcher	1-Drum	Abst-274	Tynes
Stivers-Streeter	1-Vardy	Sec-350	TE&L
Woolen-Reed	1-Drum	Abst-274	Tynes
Pennell et al	2-Drum	Abst-274	Tynes
Shaw et al	1-Kisinger	Abst-57	Connor
Shaw et al	1-Roack	Abst-1629	Rogers

PANHANDLE

Carson County

Marland	1-Burnett	Sec-79 Blk-4	H&GN

Gray County

Shamrock	2-Clayton	Sec-50 Blk-25	H&GN
Texas	10-Saunders	Sec-1	Eustice
Texas	2-McLarty et al.	.....	Rose
St. Clair	1-Dial	Sec-10 Blk-25	H&GN

Hutchinson County

Marland	1-Johnson	Sec-5 Blk-1	B&B

Moore County

Amarillo	2-Warrick	Sec-92 Blk-46	H&TC
Phillips	1-Taylor	Sec-244 Blk-T-3	H&TB
McMann	2-Sneed	.....	Robinson

Wheeler County

Lone Star	4-Jones	Sec-1 Blk-24	H&GN
Clarke et al	1-Purcell	Sec-51 Blk-17	H&GN

WEST TEXAS

Fisher County

Gillman et al	1-Cleveland	Sec-116 Blk-2	H&TC
Cranfill-Reynolds	1-Willingham	Sec-207 Blk-1	BBB&C
Cranfill-Reynolds	1Fleming	Sec-207	BBB&C
Cranfill-Reynolds	1-Brown	Sec-4 Blk-R	Richardson

Howard County

Ward	3-Roberts	Sec-137 Blk-29	W&NW
Pure	11-Chalk	Sec-125 Blk-29	W&NW
Moody	10-Roberts	Sec-136 Blk-29	W&NW
Moody	14-Roberts	Sec-137 Blk-29	W&NW
Merrick-Lamb	7-Clay	Sec-126 Blk-29	W&NW
Marland	12-Clay	Sec-139 Blk-29	W&NW
Marland	6-Clay	Sec-155 Blk-29	W&NW
Magnolia	18-Roberts	Sec-136 Blk-29	W&NW
Humble	2-Clay	Sec-138 Blk-29	W&NW
Humble	1-Clay	Sec-138 Blk-29	W&NW
Marland	1-Overton	Sec-5 Blk-32	T&P
Cranfill-Reynolds	1-Abrams	Sec-3 Blk-32	T&P
American-Maracaibo	1-Settles	Sec-158 Blk-29	W&NW

Irion County

Sun	1-Tankersley	Sec-8	GC&SF

Nolan County

Bradstreet et al	1-Kuteman	Sec-95	T&P

Pecos County

Marland	1-Eaton	Sec-100 Blk-8	H&GN
Gulf Prod	16-Smith	Sec-22 Blk-194	TC
Mid-Kans-Transc.	8-Yates	Sec-32 Blk-194	TC
Buell-Hagen	1-University	Sec-36 Blk-18	University
Phillips	1-Ramsey	Sec-17 Blk-194	TC

Upton County

Wentz	5-Sherk	Sec-35 Blk-1	MK&T

Winkler County

Southern Crude	T882-Hendricks	Sec-27 Blk-26	PSL
Southern Crude	T88CX1-Hendricks	Sec-21 Blk-26	PSL
Southern Crude	T89J5-Hendricks	Sec-9 Blk-B-12	PSL
Southern Crude	T89J4-Hendricks	Sec-9 Blk-B-12	PSL
Republic Prod	13-Hendricks	Sec-45 Blk-26	PSL
Humble	C8-Hendricks	Sec-10 Blk-B-12	PSL
Humble	C7-Hendricks	Sec-10 Blk-B-12	PSL

Completions in Texas, Week Ended February 9, 1929

NORTH CENTRAL AND EAST CENTRAL TEXAS

Anderson County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Humble	1-Collier	.....		T.D. 3851	Dry

Brown County

Phillips	18-Hickman	Benson	Blk-783	T.D. 1295	Dry
Mook-Tex et al	3-Newton	Travis	Blk-148	T.D. 1384	Dry
McCartney	1-Suttles	Mitchell	Blk-140	T.D. 1154	Dry
Humble	1-Fuller	Jennings	Blk-353	T.D. 1801	Dry
Hammon-Garrett	2-Starkey	Amendaris	Blk-602	T.D. 1215	Dry
Davis et al	1-Thompson	Pruett	Blk-135	T.D. 1970	Dry
Daniels et al	1-Leslie	Prentice	Sec-36	T.D. 1356	Dry
Bruce	1-Shields	Brown		T.D. 640	Dry
Humble	18-Hockett	Harris	Blk-784	1193-1209	6
Humble	9-Byles	T&NO	Blk-43	1307-1324	100
Burris et al	11-Newton	Curlong	Blk-151	1189-1220	20

Coleman County

Taylor	1-Young Bros	Greer	Blk-192	1654-1658	5½M
Texas	1-Beatty	Sanders	Blk-93	1116-1117	20
Head	1-Gray	Hope	Blk-169	T.D. 410	Dry
Red Bank	1-Blair	GH&H	Sec-18 Blk-1	T.D. 3198	Dry
Manhattan	1-Feather-ston	GH&H	Sec-52 Blk-2	T.D. 4332	Dry
Dunnagan et al	1-Baugh	Young	Blk-494	T.D. 1401	Dry

Cherokee County

Nichols et al	1-Kennedy	Brewer		T.D. 4335	Dry
Humble	4-Weinberg	Trimble	Blk-13	T.D. 3983	Dry

Freestone County

Hoosier et al	1-Sessions	.....		T.D. 3341	Dry

Jack County

Fletcher	1-Johnson	Perry		T.D. 3660	Dry
Liedecker	1-First State Bk. of Byson	McKinsey	Sec-2	T.D. 4138	Dry

Jones County

Atkinson-Sandifer	1-Hudspeth	Miles	Sec-22	2577-2585	35
Marland	6-Mason	T&P	Sec-18 Blk-19	2503-2508	240

Limestone County

Hicks-Deering	1-Stroud	Varella		T.D. 4416	Dry

Runnels County

Vacuum	1-Brevard	Diaz	Sec-21 Blk-532	T.D. 2594	Dry

Shackelford County

Tennant et al	1-Mathews	ET	Sec-56	T.D. 1260	Dry
Terry et al	1-Flippen	T&P	Sec-35 Blk-11	T.D. 1205	Dry
Big State	1-Jetten	T&P	Sec-14 Blk-11	T.D. 1308	Dry
Cranfill-Reynolds	1-Diller	ET	Sec-5	T.D. 1110	Dry
Mid-West Explo.	3-Dyer	T&P	Sec-85 Blk-12	T.D. 1185	Dry
Mid-West Explo.	4-English	TE&L	Sec-542	T.D. 800	Dry
Morrison	1-Nail	Brock		T.D. 1200	Dry
Morton	1-Ezele	LAL	Sec-3	T.D. 738	Dry
Roeser-Pendleton	33A61-Cook	ET	Sec-61	1218-1248	75
Roeser-Pendleton	9B61-Cook	ET	Sec-61	1339-1341	40

Smith County

Amerada	1-Christian	Florez		T.D. 5400	Dry

Stephens County

State	1-Hall	T&P	Sec-11 Blk-7	T.D. 4414	Dry
Bowden-Houston	1-Vaughn	T&P	Sec-54	2107-2142	25
Glenridge	1-Keathley	T&P	Sec-24 Blk-5	3065-3075	3M

Throckmorton County

Gilman-McMurray	3-Frazier	TE&L	Sec-914	T.D. 276	Dry

NORTH TEXAS

Archer County

American	6-Cernosek	TE&L	Sec-2409	1423-1438	20
Gilliland	1-Symank	Meade	Blk-11	1451-1455	30
Pet. Prod. et al	1-Phillips	BBB&C	Blk-6	1175-1180	25
Turner et al	4-Lyles	Hooper	Blk-7	1700-1704	125
Peacock	3-Williams	Hand		T.D. 590	Dry
Perkins-Cullum	3-Williams	Hand		T.D. 615	Dry
Texas	1-Pearston	Harris	Blk-104	T.D. 1558	Dry

Cooke County

Powell	1-Dennis	Pope		1555-1556	5
Kewanee	4-Hyman	ET		1357-1408	236

Foard County

Empire Marland	1-Halzell	Moore		T.D. 3212	Dry

Wichita County

Cable et al	1-Hines	H&GN	Sec-11	T.D. 850	Dry
Goldsmith et al	1-Roller	McKinney	Blk-16	T.D. 1876	Dry
United Prod	2-Hodge	H&TB		1482-1490	35
Holbrook-Woods	29-Kemp	H&TB		1476-1495	85
Humble	7-Taylor	KWVFL	Blk-81	1463-1487	200
Humble	8-Taylor	KWVFL	Blk-81	1472-1486	75
Humble	9-Taylor	KWVFL	Blk-81	1473-1492	200
Staley-Wynne	10-Kemp	H&TB	Blk-82	1463-1485	250
Staley-Wynne	11-Kemp	H&TB	Blk-82	1465-1475	180
Staley-Wynne	12-Kemp	H&TB	Blk-82	1462-1491	400
United Prod	2-Allen	KWVFL	Blk-44	1477-1490	75
United Prod	9-Hodge	H&TB		1466-1492	90

Wilbarger County

Waggoner Ref	2-Waggoner	H&TC	Sec-31 Blk-4	2402-2406	130
Waggoner Ref	3-Waggoner	H&TC	Sec-31 Blk-4	2368-2370	250
Cosden	33-Waggoner	H&TC	Sec-31 Blk-4	2325-2327	56
Easter	2-Waggoner	H&TC	Sec-26 Blk-4	2336-2348	317
Fain-McGaha	28-Waggoner	H&TC	Sec-24 Blk-4	2408-2457	400
Fain-McGaha	29-Waggoner	H&TC	Sec-24 Blk-4	2425-2439	210
Fain-McGaha	2-Waggoner	H&TC	Sec-18 Blk-4	2378-2400	170
Golding-Cockran	2-Waggoner	H&TC	Sec-32 Blk-4	2424-2428	100
McKenna	4-Waggoner	H&TC	Sec-32 Blk-4	1848-1862	327
Phillips	3-Waggoner	H&TC	Sec-18 Blk-4	2367-2387	103
Phillips	3-Waggoner	H&TC	Sec-42 Blk-4	2291-2292	60
Texas	8-Waggoner	H&TC	Sec-24 Blk-4	2400-2418	80
Waggoner	4-Waggoner	H&TC	Sec-24 Blk-4	2442-2458	196
Beasley et al	1-Waggoner	H&TC	Sec-18 Blk-5	T.D. 1850	Dry
Phillips	2-Waggoner	H&TC	Sec-41 Blk-4	T.D. 2601	Dry
Staley-Wynne	1-Waggoner	SP	Sec-1	T.D. 1975	Dry
Stadiman-Thrasher	1-Waggoner	H&TC	Sec-9 Blk-4	T.D. 2500	Dry

Young County

Rathke-Panhandle	12-Prideaux	Rohus		604-614	20
Walton et al	1-Prideaux	Tynes		455-460	35
Moran Drlg	3-Graham	TE&L	Sec-193	1076-1101	7
Petroleum Prod	5-Parish	TE&L	Sec-409	1098-1106	5
Bradstreet	1-Snider	Wilson		560-565	62
Kleiner et al	27-Langston	TE&L	Sec-1490	532-558	35
Panhandle	1-Weems	TE&L	Sec-1911	T.D. 702	Dry
Pennell et al	1-Drum	Tynes		T.D. 602	Dry
Rhodes et al	1-Eichelberger	TE&L	Sec-1490	T.D. 972	Dry
Riggs et al	11-Sweet	TE&L	Sec-1488	T.D. 602	Dry
Woolen-Reed	1-Dailey	Tynes		T.D. 612	Dry
Fain-McGaha	1-Campbell	TE&L	Sec-1375	T.D. 958	Dry
Burns et al	1-Sullivan	TE&L	Sec-1918	T.D. 600	Dry
Carter-Ruff	1-Gragg	Rohus		T.D. 865	Dry
Holbrook-Woods	4-Watson	YCSL	B k-22	T.D. 820	Dry
Hurst et al	1-Drum	Paddock		T.D. 610	Dry

PANHANDLE

Carson County

Magnolia	6-Fee	I&GN	Sec-91 Blk-4	3155-3161	725
Stubblefield-Shell	1-Cooper	I&GN	Sec-5 Blk-9	2985-3116	150

Gray County

Phillips	1-Olsen	H&GN	Sec-64 Blk-B-2	T.D. 4020	Dry
Texas	4-Davis	I&GN	Sec-86 Blk-3	T.D. 3296	Dry
McElroy et al	2-Bull	H&GN	Sec-3 Blk-B-2	2790-2820	20
Skelly	2-Saunders	ACH&B	Sec-4 Blk-1	2585-2655	840
Skelly	4-Saunders	ACH&B	Sec-4 Blk-1	2811-2817	25
Texas	7-Saunders	ACH&B	Sec-4 Blk-1	2661-2758	1440
Texas	8-Saunders	B&B	Sec-3	2748-2755	130
Perkins-Cullum	1-Saunders	BS&F	Sec-1	2910-2985	40
Plains Drlg	2-Saunders	ACH&B	Sec-4 Blk-1	2555-2556	2850
United Eight	1-Clay	H&GN	Sec-177 Blk-B-2	3250-3251	75
Skelly	1-Jackson	H&GN	Sec-90 Blk-B-2	3053-3064	140
Texas	9-Saunders	Eustice	Sec-1	2668-2672	542

Hutchinson County

Phillips	2-Pool et al.	H&TC	Sec-82 Blk-46	3112-3116	25
Phillips	1-Johnson	H&TC	Sec-72 Blk-46	2978-2985	60
Simms	2-Jordan et al.	I&GN	Sec-124 Blk-4	3052-3092	125

Moore County

Phillips	3-James et al.	Robinson		3126-3130	530

Wheeler County

Martin et al	1-Close	H&GN	Sec-82 Blk-23	1350-1460	55M

WEST TEXAS

Borden County

Condor	1-Hall	T&P	Sec-5 Blk-32	T.D. 3820	Dry

Howard County

Amerada	3-Roberts	W&NW	Sec-137 Blk-29	2927-2956	143 (1 Hr.)
Amerada	6-Roberts	W&NW	Sec-137 Blk-29	2954-2969	64
American et al	2-Settles	T&P	Sec-6 Blk-32	2297-2317	211
Hyer-Yates	2-Clay	W&NW	Sec-155 Blk-29	1802-1838	225
Louisiana	3-Settles	T&P	Sec-6 Blk-32	2300-2302	950
Magnolia	5-Roberts	W&NW	Sec-136 Blk-29	2960-2984	500
Magnolia	17-Roberts	W&NW	Sec-136 Blk-29	2500-2558	200
Marland-Texon	6-Settles	T&P	Sec-6 Blk-32	2200-2220	500
Moody	6-Roberts	W&NW	Sec-136 Blk-29	2520-2675	60
Pure	8-Chalk	W&NW	Sec-125 Blk-29	1765-1771	50

Pecos County

California	5-Smith	TC	Sec-23 Blk-194	1660-1830	60 (1 Hr.)
California	6-Smith	TC	Sec-23 Blk-194	1634-1844	110 (1 Hr.)

Stonewall County

Sun-Cranfill	1-Raynor	H&TC	Sec-20 Blk-D	T.D. 3615	Dry

Winkler County

Amerada	2-Cowden	PSL	Sec-3 Blk-B-12	2937-3075	425 (1 Hr.)
Cromwell-Pickerel	1-Hutchins	PSL	Sec-46 Blk-26	2980-3252	100 (1 Hr.)
Gulf Prod	25-Hendricks	PSL	Sec-34 Blk-B-5	2841-3064	594 (1 Hr.)
Humble	2-Hendricks	PSL	Sec-10 Blk-B-12	2830-2903	444 (1 Hr.)
Shell-Texas	5-Cowden	.....		2733-3030	100 (1 Hr.)
Shell-Texas	11-Hendricks	PSL	Sec-29 Blk-B-5	2700-2934	1000 (1 Hr.)
Shell-Texas	6-Hendricks	PSL	Sec-40 Blk-26	2773-3075	400
Pure	6-Hendricks	PSL	Sec-41 Blk-B-5	2947-2980	128
Shell	1-Daugherty	PSL	Sec-3 Blk-74	3110-3135	60 (1 Hr.)
Shell	5-Hendricks	PSL	Sec-41 Blk-B-5	3010-3025	8500
Skelly	2-Hendricks	PSL	Sec-39 Blk-26	2635-3142	20
Skelly	1-Hendricks	PSL	Sec-10 Blk-B-12	3028-3040	415 (1 Hr.)
Southern Crude	T8802-Hendricks	PSL	Sec-28 Blk-26	2819-2825	100 (1 Hr.)
Southern Crude	T88N4-Hendricks	PSL	Sec-28 Blk-26	2625-2641	40 (1 Hr.)
Southern Crude	T88H5-Hendricks	PSL	Sec-2 Blk-B-5	2730-2968	10,000

Completions in North Louisiana and Arkansas, Week Ended February 7, 1929

Louisiana—Bossier Parish—Sarepta

Company	Well	Location	Depth	Yield
Ark. Nat. Gas Corp.	Tidwell No. 1	29-22-11	3462	salt water, abd.

Bossier Parish—Elm Grove

Palmer Corp	W. H. & C. B. Hodges B-12	25-16-12	1875	1M gas

Caddo Parish—Pine Island

C. G. Gibbins	B. H. Gibbins No. 1	15-21-16	2634	salt water, abd.
Simplex Oil Co.	Thomas et al. No. 5	15-20-15	2248	salt water, abd.

La Salle Parish—Urania

Randall et al	Urania No. 2	1-10-1E	640	dry, aband.

Morehouse Parish—Monroe

Company	Well	Location	Depth	Yield
Nat. Gas Prod. Co.	Crossett Lbr. Co. No. 22	34-21-4E	2203	6M gas

Arkansas—Bradley County

Ohio Oil Co.	Southern Lbr. No. 2	19-16-9	3217	dry, abd.

Nevada County

Humble O. & R. Co.	J. Haynie No. 2	6-14-20	1150	25 Bbls.

Union County—Rainbow City

H. L. Hunt, Inc.	Gregery No. 4	10-17-14	3055	100 bbls.
Pure Oil Co.	W. E. Gregory No. 6	15-17-14	3261	100 bbls.

Union County—Upland

Sam Sklar, Trustee	Fitzgerald No. 10	8-18-15	2190	10 bbls

Methods for Surveying Deviation of Hole Developed in California Fields

By W. E. Green
N. P. N. STAFF WRITER

NUMEROUS surveys of wells in southern California, especially in the Long Beach field, the past six months, indicate that many holes deviate all the way from a few feet to close to 3000 feet from the perpendicular.

The practice of surveying holes, especially deep ones, is growing, but oil company executives are keeping the detailed information under cover, mostly on account of legal aspects. They are not sure what might happen should accurate information show their well, in a field made up of small leases, had drifted onto a neighboring lease, and was producing oil and gas from under another company's property. It is believed this question in time will have to be passed upon by the courts, but no one company wants to take the lead in precipitating such a court battle.

A method of surveying deviation in holes, perfected by Alexander Anderson of Fullerton, Calif., is being used, except in some instances where the acid bottle is resorted to. With the acid bottle, it is possible to learn how much the hole is off, but the direction of the drift is not known.

The Anderson method is said to give more accurate information as to the extent of drift and also its direction. Mr. Anderson has applied for patents on his apparatus, of which little is known as yet. It is known that it is a photographic device and that he can measure a drift to approximately 50 degrees.

Mr. Anderson, late in 1926, surveyed the deep C.C.M.O. well in Orange county, Cal., but at that time he was not able to secure information clear to the bottom of the 8000-foot hole, although he did learn that the hole had drifted off a 10-acre plotted tract.

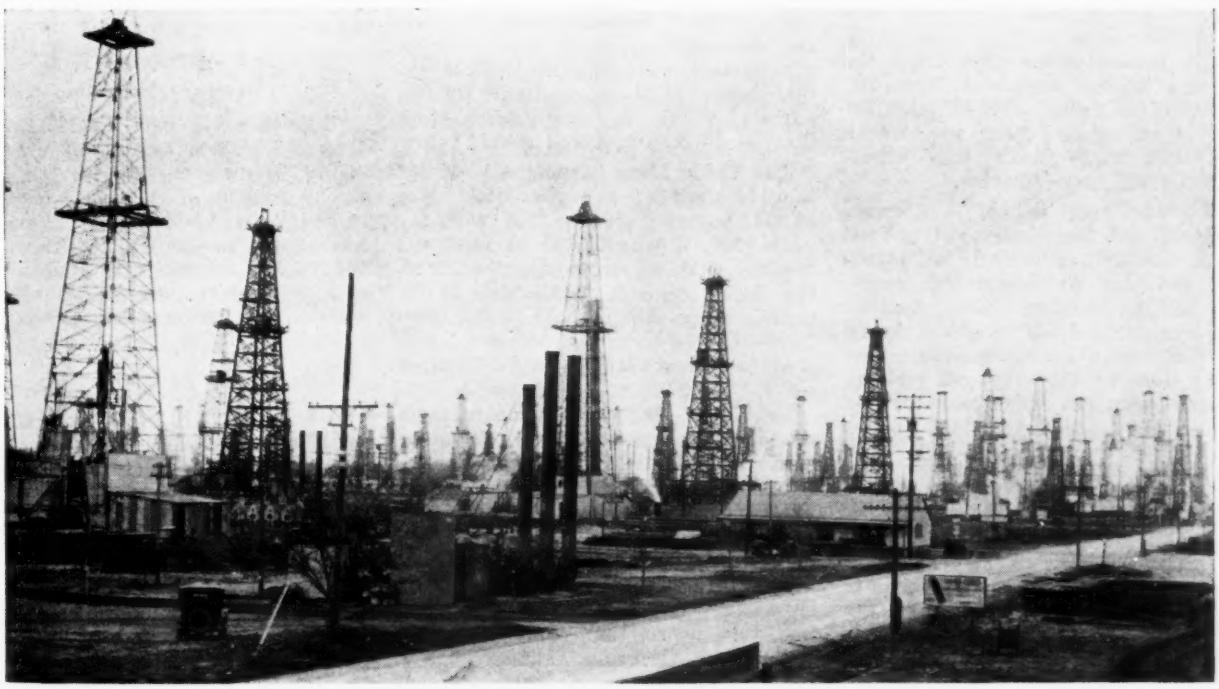
Since 1926, few holes were surveyed by Mr. Anderson until early in 1928, when oil company executives began to pay more attention to surveying. Mr. Anderson now keeps two field crews employed and is several weeks behind in his work.

A few of the major companies have been having their wells surveyed, but it seems that the smaller companies are in the lead in paying for surveys. On account of the demand for surveys of this character, a number of men with an inventive turn of mind are working on methods and apparatus to do this work. It is understood that at least two methods are now undergoing field tests in California and probably a half dozen others are attempting to perfect new schemes and methods.

Long Beach operators are turning to well surveying faster than in any other field, due to the great depth of holes, difficult formations, presence of a fault that runs through the field and edge conditions. Holes have run together at Long Beach, but in such cases, since no surveys had been made, no one knew where the holes contacted. It was purely a guess as to which hole was in worse condition, or further off vertical.

Those who have made use of the survey contend that its information makes it possible to correlate to greater accuracy the formations. Heretofore cores have furnished information on dips in structure. It is now concluded that such information is much more valuable in connection with a survey of deviation in the hole. If the drift of the well is known, then the indicated dip in the core can be corrected. Coring, in connection with survey information, apparently gives additional and valuable data.

It has been known at Long Beach that deep holes in some instances, especially near the edge of the field,



A view of Santa Fe Springs field in California

would drift entirely off structure, but just what had happened was not known until the hole had been surveyed for drift and direction. Sometimes it has been possible to plug the hole and redrill, bringing bottom back into productive territory.

It has also been found that a hole if located near the fault, sometimes would drift into and through the fault into poor or barren territory. In such cases, if the hole was in good mechanical condition, it has been possible to redrill, bringing about a drift in the opposite direction and into the proven oil zone.

It has also been found useful to refer to a survey in fishing jobs, thus being able to decide whether it would be proper to sidetrack and drill ahead. In some instances the drift might be in such a direction that to sidetrack would prove to be a useless expenditure of money.

It has been found that a number of holes deviate from vertical to such an extent that in many instances a wildcat might not be a good test of the actual location. A 6000-foot hole around 2000 feet off vertical could easily miss an oil or gas sand.

Much secrecy has surrounded surveying jobs, especially at Long Beach, and only recently has it become fairly well known that the practice of surveying is becoming widespread. It had been noted that many holes are being redrilled at Long Beach, but the true reasons for such redrills were not known. It is now becoming known that a survey often gives the true reason for a wet cementing job. Long Beach is made up largely of small leases and many wells have been drilled in the past. By referring to the logs of wells in certain areas, the driller reached the conclusion that his pipe could be cemented at a certain number of feet from the surface to secure a proper water shutoff. It now develops that often the hole has drifted anywhere from 200 to 2500 feet from vertical, and for that reason logs of other wells mean little, and these wells may themselves be off perpendicular.

One hole was drilled to nearly 6000 feet and when surveyed showed that it had drifted entirely off structure, and due to mechanical conditions had to be abandoned. Another hole was drilled to slightly below 5000 feet and a survey indicated that it was close to 1500 feet off vertical. In some instances holes have drifted to such an extent that the bailer would not go to bottom.

To Test Louisiana Law

WASHINGTON, Feb. 9.—The U. S. Supreme Court has been asked to pass on the constitutionality of the Louisiana state law imposing a severance tax on oil. The new law which is in dispute bases the amount of tax on the gravity of the oil.

Production from Navajo Leases Declined 60% in 1928

CRUDE production from wells on the Navajo Indian reservation in New Mexico declined 60 per cent in 1928 according to a compilation announced by Charles H. Burke, Commissioner of Indian Affairs. Production for the year totaled 344,000 barrels as compared with 860,000 barrels in 1927, the banner year for the reservation.

In the past six years the Navajo tribal funds have been enriched by more than $700,000 from royalty oil. In the past two years the income was $373,000.

The development of Navajo oil lands began with a lease entered into with the Midwest Refining Company in 1921 covering what is known as the Hogback Structure on the Navajo Treaty Reservation in New Mexico. A discovery well on the Navajo reservation was brought in under this lease in the Fall of 1922, with a production of approximately 300 barrels a day. Since then two general sales of oil and gas mining leases on the reservation have been held, from which $143,000 bonus money was received. There are now 23,880 acres on the treaty reservation covered by 44 oil and gas mining leases. On three of these leases oil has been discovered in paying quantities and there are now 30 producing wells.

Production from what is known as the Rattlesnake Structure has been as follows: During the calendar year 1926, 384,161 barrels of crude oil were shipped; for the calendar year 1927, 315,813 barrels were shipped; and for 1928 up to August 1, 104,213 barrels were shipped. Thus did this lease yield more than 800,000 barrels of oil in the period of a little more than two and a half years.

The Table Mesa Structure yield for the last half of the year 1926, was 53,535 barrels; during the calendar year 1927, it was 65,690 barrels, and for the first seven months for 1928, the latest figures available, 28,070 barrels were shipped. Thus the yield from this lease for a period of two years and one month, was a total of 147,295 barrels of crude oil.

From the Hogback Structure from the time of discovery in 1922, up to September 16, 1928, to which date the figures are available, a total of 821,721 barrels of oil have been sold, and returns from which in cash amounted to $1,484,009. One-eighth of this oil goes to the Indians in royalty. They have received from the Hogback Structure more than $185,000. For a period of 31 months, ending on August 1, 1928, the total shipments from this lease amounted to 530,860 barrels of oil, an average of 17,000 barrels per month or more than 500 barrels per day.

The Navajo reservation is the largest of all the reservations and the least explored. It has an area twice as great as that of the State of New Jersey. The present development of oil on this reservation is taken as an indication of other wealth that it may be shown to produce. The Department of the Interior has issued 154 prospecting permits covering approximately 300,000 acres of Navajo land. Because of the bad market for oil, no great activity has been shown in this development during the past year.

The money accruing to the Indians as a result of mineral development on their land becomes tribal money. It is not to be allotted to individual Indians but is to be spent for the improvement and development of the reservation in general. This means that it may be spent for road building which is greatly needed to open up isolated areas on the reservation. It may be spent for the development of springs and wells which are greatly needed, that the reservation may be better used by these Indians in the prosecution of their chief industry, which is sheep raising, or it may be spent in the purchase of additional lands for the grazing of Indian stock. The Indians have themselves decreed that these tribal funds should be spent in this way, and the results are sure to be a development of the reservation in such a way as to make it of steadily increasing value as an industrial plant.

Mexican Production

CLEVELAND, Feb. 9.—Mexico produced 50,000,000 barrels of crude oil in 1928, dropping to fourth place among nations of the world according to the New York Times. Venezuela was second to the United States with 105,000,000 barrels and Russia third with 80,000,000 barrels. U. S. Production was 883,000,000 barrels.

Mail Line To South America

WASHINGTON, Feb. 8.—An air mail line to South America extending as far as Santiago, Chile, is being planned by the post office department. Bids for carrying the mail from Cristobal, Canal Zone, to Santiago will be opened on Feb. 28.

The proposed line would be the longest in the world. The air mileage from Cristobal to Santiago is 3,400 miles and from New York is 6,000 miles. The line would cut down mail time by 2 weeks.

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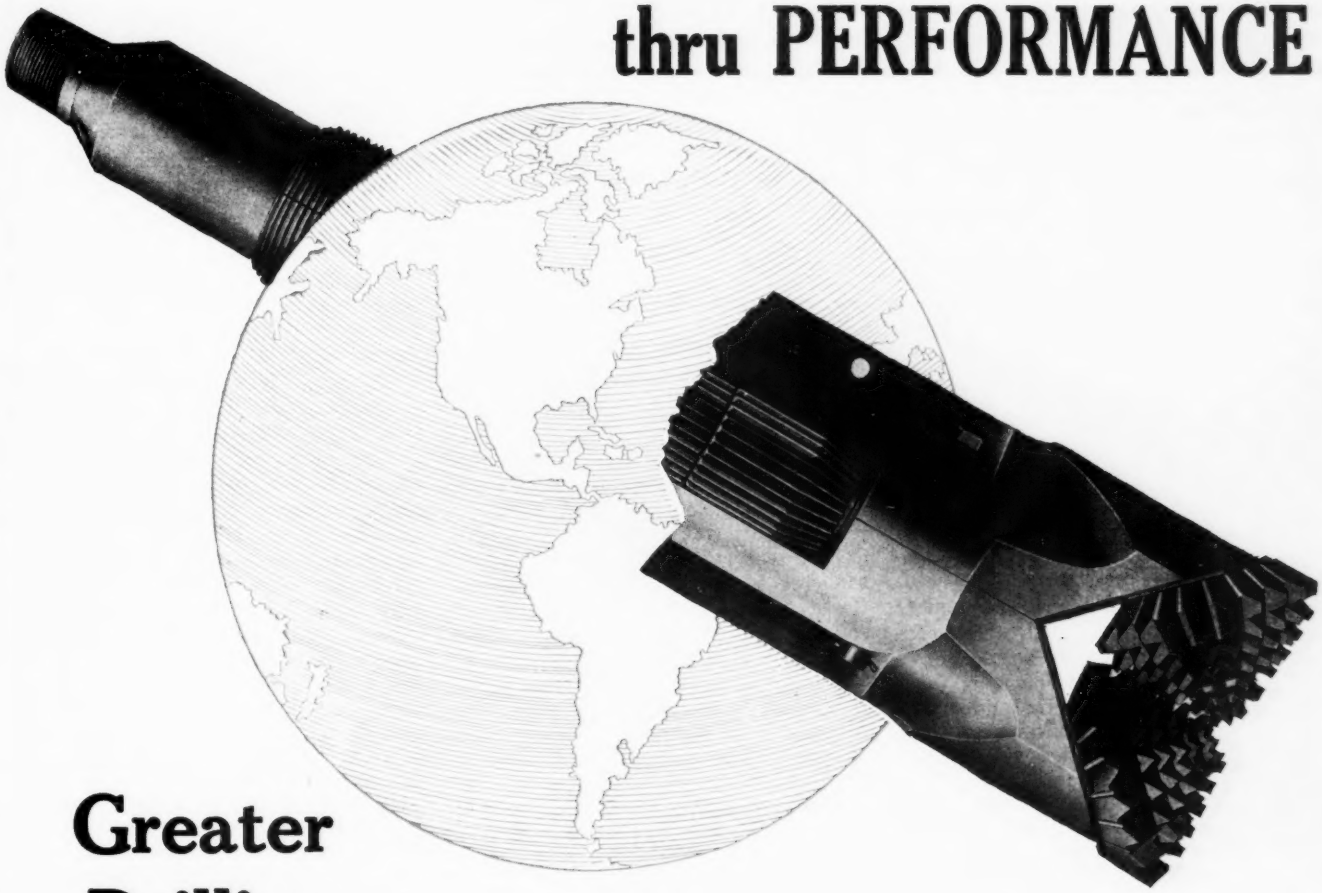

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Results of Repressuring Depleted Sands In Old Pennsylvania Fields

By William J. Brundred*

SECOND and concluding portion of the paper delivered by William J. Brundred, president of Brundred Oil Corp., Oil City, Pa., before Eastern district meeting, American Petroleum Institute division of development and production engineering, Oil City, Nov. 24.

ALL inlet wells are cleaned of paraffin by steaming, or dissolving with kerosene or gasoline, in order to prevent the high air pressure forcing paraffin into the interstices of the sand, thereby retarding if not entirely obstructing the inflowing air.

Where it is desired to simultaneously pressure, through the same inlet well, two sands of unequal porosity, a separate air string is run to each sand. A rag packer, made of strips of canvas, is wired to the bottom of the two-inch inner string of pipe. It fits the hole snugly, until pushed down into the shot hole, at which time the canvas strips fall forward, and, when the tubing is raised, pack tightly in the crown of the shot hole.

Neat cement is poured on top of the packer, forming a plug which confines the air pressure to the saturated portion of the sand. As cement would normally set slowly, under conditions existing in the bottom of a well, a quick setting cement is used. The cement is not poured down the wall of the well, and given an opportunity to deposit on the walls of the upper sand; but is poured through a string of pipe which extends below the upper sand. Thereafter the pipe is removed. Two days later, a packer is attached to the end of a 3-inch string and similarly cemented in the crown of the shot hole of the upper sand. Air passes through the inner string to the lower sand, and between the two strings to the upper sand, the volume being controlled by valves, the proper setting for which is determined by frequent meter readings.

Where old air holes have been shot in such a way that the shot hole extends into a barren bad bypassing stratum, new inlet holes are drilled a few feet away from the old hole. If sand conditions are not determined by coring, the sand is drilled carefully, a foot at a time, to note the first indication of oil. In the meantime, air pressure is maintained on the old hole, and open flow gas readings are taken on the new hole, at the end of each short screw of sand.

THE readings plainly show the stratum through which the air is traveling; but results are further checked by setting a hook wall packer, placed on the end of a string of tubing, at different levels in the sand, and noting the relative change in volume that flows from above and below the packer at each new setting. The new well, unshot, is then cemented at the proper level.

Some inlet wells, which were abandoned, had taken through a by-passing stratum, as high as 150,000 cubic feet of free air per day, at 130 pounds pressure. The new well, drilled 35 feet away and cemented as above stated, took 20,000 feet at 350 pounds pressure, indicating air was penetrating the proper strata.

The sand in the old hole is then cemented; the cement being forced into the pores of the sand under air pressure. If the old hole is not cemented, the air pressure would rapidly channel through the old hole; and, escaping therefrom, would not reach the surrounding pumping wells. If an attempt is made to keep the well on production, by raising the working barrel, so as to leave a high fluid column in the hole to lessen the escape of air, the fluid column, forced upward by the restored rock pressure from the saturated stratum to which the air is confined, attains only a certain level. With additional height, the static pressure of the fluid column would feed oil into the pebble stratum, since the pebble stratum is very porous and of normal or unrestored rock pressure. If the old hole is plugged above the sand, oil would similarly be driven from the stratum of restored rock pressure to that of unrestored pressure.

Before air is introduced, there is, in most cases, insufficient gas to operate the compressor engine, making it necessary to either pipe gas from an extraneous source or operate the compressor engine at short intervals

*President, Brundred Oil Corp., Oil City, Pa.

Table No. 5—Analysis of Field Gas Sample from Properties 1, 2 and 3

PROPERTY No. 1				
Carbon-Dioxide	2.1%			
Air	96.0%			
Hydro-Carbons	1.9%	Specific Gravity,		3.76
Mixture	100.0%	"	"	1.06
PROPERTY No. 2				
Carbon-Dioxide	1.7%			
Air	89.9%			
Hydro-Carbons	8.4%	"	"	1.43
Mixture	100.0%	"	"	1.04
PROPERTY No. 3				
Carbon-Dioxide	2.0%			
Air	91.2%			
Hydro-Carbons	6.8%	"	"	3.05
Mixture	100.0%	"	"	1.15

*Analysis of gas samples were made by the United Natural Gas Co., Oil City, Pa.

during the day and night when the pumping engines are shut down, until such time as a partial restoration of pressure causes an increase in the gas supply. Air, passing through a saturated stratum, usually picks up enough hydro-carbons to operate the lease engine, provided large enough gas lines have been installed to take care of a large but diluted gas supply.

If the lines are not of sufficient capacity, back pressures on the pumping wells retard production on wells that have not yet been effected by the air. With the gas supply badly aeriated, and in order to get the full explosive charge in engine cylinders, it is necessary to restrict the natural air supply to the engine, and substitute the air-diluted gas instead by connecting the lease gas to the gas and air intake of the engine.

Table No. 5 gives an analysis of the gas supply taken from the trunk lines on properties 1, 2 and 3. The hydro-carbons which are the only combustible in the mixture are present in small percentages. Their high specific gravity, however, indicates that the heavier fractions are present, having a high B.t.u. value. The engines run satisfactorily on this kind of fuel, but the large volume of air in the mixture emphasizes the necessity of gas lines of large capacity. Approximately 50 to 60 per cent of the amount of air delivered to inlet wells comes out of the pumping wells in the form of an aeriated gas. The balance presumably is absorbed into the oil or driven to surrounding properties.

Cost Of Installation

THE cost varies according to the equipment required for each separate property, and increases rapidly if two or more sands are repressured. An installation of minimum cost would be for a one-sand stratum, completely saturated, and with no overlying porous stratum to carry away the air. On such a property, air could be turned into the casinghead.

An average installation would be a one-sand stratum, barren at the top, and requiring one air string with packer or preferably a cement plug to seal off the barren sand.

An installation of maximum cost would be two or more strata of unequal consolidation, requiring two or more air strings with separate volume control for each string.

Figures given in Table No. 7 cover the cost of installation on Property No. 2, of 508 wells and 1075 productive acres, repressured with compressors of 480 horsepower capacity, 35 of the 75 inlet wells repressuring two horizons, the remaining repressuring but one. The average cost given per inlet well is extremely high, due to its including the cost of drilling 22 of the inlet wells to an average depth of 900 feet, and coring 6 of the 22. The cost of repressuring an average property of compact sand should lie well within the figures given.

Table No. 6—Installation Costs

Cost per inlet well (75 wells)	$1,793.00
Cost per well for all wells (508 wells)	264.79
Cost per productive acre (1,075 acres)	125.12

Table No. 7—Percentage of Increase or Decrease Over Lifting Cost Before Air Was Applied

Year	Increase Over 1924
1925	10.2%
1926	42.6%
1927	5.1%
1928	*21.0%

*Decrease

Lifting Costs

THE operating expense on a repressured property is materially increased, due principally to increased pulling of worn cups or plungers, caused not only by the increased pumping made necessary in handling the greater amount of fluid, but also due to floating sand carried in by the action of the air or gas. A sharp increase in lifting cost per barrel occurs when air is first applied, but decreases as the increasing volume of fluid bears the burden of the additional expense. The increase, at first, followed by a decrease later on, is given in percentages of the original lifting cost before pressure was applied in Table No. 7.

Water Flooding vs. Repressuring

IN REJUVENATING old properties, a question arises as to the relative efficiency of the two methods now being practiced; viz. water flooding, as now used in the fields around Bradford, Pa., in comparison with repressuring with gas or air.

The Bradford sands are fairly uniform; but, if water drives through a porous stratum more rapidly than through the rest of the sand, expensive equipment would be required to handle it, or the well would be abandoned without complete extraction of the oil from more compact portions of the sand. Air, however, traveling through such a stratum, can partially be controlled; and, in any event, nothing more serious occurs than an ineffectual wastage of air, while pressure can still be maintained on the inlet well eventually affecting the tighter portions of the sand.

A test was made of eight-inch sections of core, taken from Property No. 2, to note the difference in action of air and water extraction of the oil. The cores were placed in the middle of three-inch by eight-inch nipples, capped at the bottom, and sealing wax was poured between the walls of the cores and nipples. With the cores in an upright position, water was driven at a 30 pounds pressure through a hole in the cap into one core, and air at 20 pounds pressure was similarly driven into the other one. During the two hours required to extract the oil, no water came through. When the water did appear, it came suddenly, with but little oil mixed with it, indicating that extraction was very complete. However, since the drive was vertically across the sand, rather than horizontally through the sand, strata

Table No. 8—Oil and Water Content of Nine Samples from Core No. 4

Position of Sample in Core, Feet Below Top	Density of Rock	Total Pore Space by Volume, Per Cent	Total Pore Space Occupied by Oil Per Cent	Total Pore Space Occupied by Water Per Cent	Total Pore Space Occupied by gas or air, Per Cent	Time Which Elapsed Between Taking of Sample and Test, Months
5.84 to 6.22	2.088	21.6	26	47	27	1*
7.26 to 7.47	2.054	22.5	27	29	44	4
7.68 to 8.01	2.105	20.5	40	38	22	1*
9.34 to 9.67	2.077	21.9	29	26	45	1*
12.06 to 12.39	2.154	19.2	28	31	41	4
13.77 to 14.17	2.213	17.1	24	27	49	4
16.39 to 17.01	2.413	9.6	31	43	26	4
19.43 to 19.77	2.062	23.1	16	41	43	4
20.52 to 20.85	2.189	18.4	26	48	26	4

*Week

of unequal consolidation would have no bearing in preventing complete extraction without any trapping of the oil.

In the other test, air came through the core within 15 minutes after it was applied. Several hours later, it was still bringing oil, but in lesser volume. The test was then abandoned, as the oilwet walls of the core softened the sealing wax, permitting air to blow through at the sides of the core. No quantitative test of the amount of oil extracted by each method was made, since extraction with the air was not complete at the time the test was discontinued. The point of interest is that, in the first test, the oil came, followed by the water; and, in the other test, air did not drive the oil ahead of it, but continually passed through, and carried the oil with it.

Porosity of the Sand

MR. CHARLES H. FETTKE was present when cores were taken of the last three of the six wells cored on Property No. 2. With a view to determining the porosity and saturation of the sand, Mr. Fettke took samples at intervals throughout the length of core No. 4. Table No. 8 gives Mr. Fettke's analysis of the samples.

With respect to the high water content, Mr. Fettke has this to say: "Unfortunately, such samples give only an approximate idea of the actual oil content of the sand in the ground. They give only a minimum figure, and the actual oil content may be much greater, particularly in the case of very porous open sands that allow the oil to escape readily. Even with the use of a double-tube core barrel, a certain percentage of oil undoubtedly escapes and is replaced, at least in part, by water.

"All the samples on analysis were found to contain as much water as oil (and in most instances more). Yet the producing wells in the area where the core was taken give practically no water. Some evaporation losses also take place while the samples are in storage, and there is a slight unavoidable loss after they are removed from the containers and crushed preparatory to testing."

"The 16.1 feet of sand of core No. 4, with an average porosity of 18.3 per cent throughout an area of one acre, would be capable of holding 23,000 barrels of oil, if completely saturated. If only 27 per cent of the pore space is occupied by oil, the quantity would be 6200 barrels. The actual quantity is between these limits. In the case of complete saturation, a ton of the rock would contain 20.7 gallons of oil, with only 27 per cent saturation, it would contain only 6 gallons."

A complete paper on his analysis of five of the cores was read by Mr. Fettke, at the New York, Feb. 1927, meeting of the American Institute of Mining and Metallurgical Engineers.

Conclusion

PROPERTIES with wells of compact sand require higher pressure, less air, and take much longer to secure results than those of more porous sand.

Wells of compact sand, with a barren stratum at the top, can be repressured successfully.

No suggestion is made as to the correct air volume for the five properties discussed. It would appear, however, that production once restored can be maintained within reasonable limits over a long period of years, if additional compressor capacity is added as the production curve declines.

Cores indicate that the depletion of properties is largely of the gas rather than of the oil. Unit operation of pools would permit conservation of the gas; and, if recycled through the sand in wells carefully drilled and equipped as inlet holes at the time the pool was first opened up and before the gas was dissipated, it would seem reasonable to expect a gradual instead of a rapid decline of production.

Actual distillation from cores show oil still in the sand, far in excess of that which has been removed; and, since repressuring with air or gas does not bank or drive the oil ahead of it, similar to a water-flooding operation, but rather passes through and assists the oil in its movement to the surrounding pumping wells, it would not seem unreasonable that air or gas pressured properties could be operated profitably for many years to come.

It would seem that the high water content of the sand is properly accounted for by displacement of the oil by water during the process of coring, since there was a static pressure of 365 pounds per square inch at the point where the drill was in contact with the sand.

On these old properties, there is no means of determining to what extent nature originally saturated the sand. The cores now show little drainage. It should not be thought that the barren stratum, previously mentioned as overlying the pay sand in many wells, was indicative of what drainage had occurred, nor that, when oil was pumped from the well, oil from an all-barren stratum had opportunity to settle to a lower level in the sand. The barren stratum probably never was saturated; and, in any event, shale seams, often no thicker than a pencil lead, would have prevented downward movement of the oil.

It is questionable if the seams extend over a wide area, without pinching out. Certainly they cannot be correlated from one cored well to another; nevertheless, each seam makes distinct and separate strata of the sand body they confine, within a certain radius from the well in which they occur, and, if reaching as far as the surrounding wells, undoubtedly make several strata of variable rock pressure, the variance being dependent on the difference in porosity of the several strata so confined and the rapidity with which the more porous ones would have released their gas pressure.

Mississippi Gasser Brought In

ABERDEEN, Miss., Feb. 8.—Another strong flow of natural gas has been struck at 2,800 feet in the Arkansas Natural Gas company's Rye No. 1 well 14 miles southeast of here. About a year ago a strata was struck in this well at 2,400 feet which produced natural gas with a flow of 3,000,000 cubic feet per day.

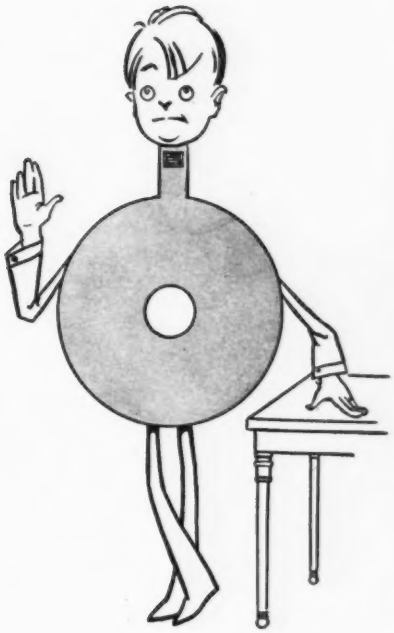
The owners of the well then decided to carry the well to a depth of 4,000 feet in the hope of striking oil. The natural gas in this well was "wet" gas with a strong gasoline content. After drilling about 400 feet deeper an entirely different strata of gas was struck and the flow is much stronger than the first producer.

Drillers state also that the drill had barely penetrated the rock when all work was shut down and the headquarters of the Arkansas Natural Gas corporation notified at Shreveport, La. When officials of the company arrive, which is expected to be Friday, a test will be made and decision made whether the well will go deeper or made a commercial producer of natural gas.

The company has already secured a franchise to supply Aberdeen with natural gas and plans also to pipe it to Columbus, Miss.

The Rye well is situated in section 22-15-17, fourteen miles southeast of Aberdeen. The gas is now escaping from the well with a roar and is coming up through nearly 2,000 feet of water which was in the hole while drilling was in progress.

The well is 14 miles south of the Carter gasser which is supplying 600 domestic gas users at Amory.



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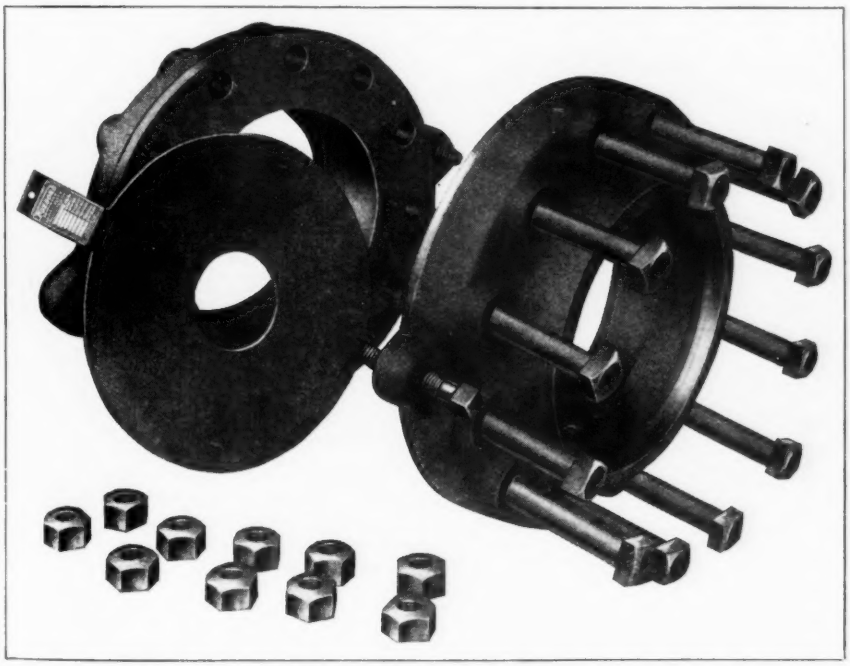

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Valley Center Operators to Spend $50,000 for Water Disposal

By John Power
N. P. N. STAFF WRITER

POLLUTION of the streams and farming land surrounding oil fields is a problem vexing enough to the operators in any oil district. Indications are that it will prove unusually so in the Valley Center area north of Wichita. The Gypsy-Marland-Buvibar interests, which drilled the discovery well on the Wright farm in 12-26S-1W, have perfected their plans —on paper—for the removal of the salt water which they expect will eventually make its appearance in ever increasing proportion to the oil produced. Given their choice of three possible solutions to the problem the one selected is considered not only the simplest and most generally satisfactory, but is also the cheapest from an overall standpoint.

An 8-inch cast-iron line will be laid from the field to the sewers on the north edge of the city of Wichita, into which the salt water will be emptied. In this way the water is effectually disposed of, the Arkansas River, which takes its winding course through this part of Sedgwick county, is not polluted at any point where it is not already so—the sewerage system of Wichita empties into the Arkansas at a point south of the city —and the volume of water is actually beneficial to the sewerage, as it will act as a flushing agent.

Cast iron is to be used in the water pipeline system, as it is felt that this material is better fitted to resist the corrosive action of the salt water than are some others. A gathering system, similar to that used to collect the oil from the various leases will be installed. The water will be admitted to the lines after settling out of the stock tanks and gunbarrels, and transported to a pumping station, the site of which has not yet been selected. Small pumps on the lease will assure the movement of the water. The main pumping station will have as its outlet the line to the sewers. Total cost of the project as outlined is estimated at about $50,000.

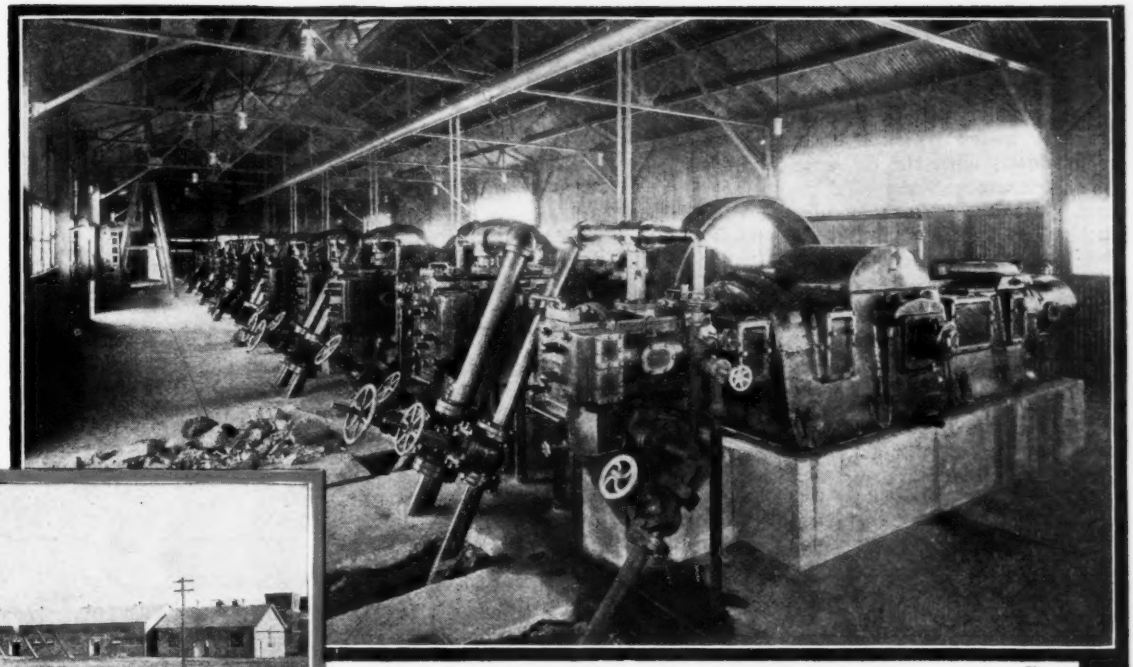
Two other solutions to the problem are available. It was possible to lay a line from the field east around the city, and empty the salt water into the Arkansas at that point. To do this, however, would have required a great deal more line, and the installation of extra large and powerful pumps. To have passed the city to the west would have required less line than on the east side, but to have utilized gravity as a propelling force would have required a huge line. Or, a site east of the field was available on which could have economically been placed a reservoir into which the water could have been piped, and allowed to evaporate.

EVAPORATION, which the engineers anticipated would have been at the rate of about 40 inches per year, would have disposed of the salt water, but would have left the salt. It would then have been necessary to arrange a flushing system. During low water periods, when there would have been no danger of the stream overflowing its banks and spreading the salt water over the adjacent land, the salt could have been flushed into Chisholm creek, which runs on the eastern edge of what is now the field. The course of this stream takes it through the eastern edge of Wichita, in which section of the city there are several wells from which drinking water is derived for some families, these wells being beside the creek, and naturally deriving their water from it. The stream is already polluted to some extent, and these wells are being condemned by the city health officials as fast as city water can be made available to replace them. So this project was entirely feasible. It would, however, have been more complicated and expensive to operate than the plan the Gypsy-Marland-Buvibar have adopted. It is, however, the third alternative

A Day With a Mid-Continent Committeeman

REGARDING COMMITTEES
9:00 AM
STARTS FOR MEETING OF COMMITTEE INVESTIGATING THE MILEAGE OF WALKING BEAMS — SPENDS HOUR AND A HALF —
GENTLEMEN — A VERY GRAVE SITUATION CONFRONTS US THIS MORNING — WHEN I CALLED THIS MEETING I DID NOT REALIZE THE MAGNITUDE OF THE TASK BEFORE US — THEREFORE, I WILL OUTLINE BRIEFLY — ETC - ETC !
10:30 AM
ATTENDS COMMITTEE MEETING LOOKING TOWARD THE STANDARDIZATION OF BOARDING HOUSE PIE — ONE HOUR SPENT HERE —
— SO IT BECOMES NECESSARY FOR US TO APPOINT A SUB-COMMITTEE OF SIX TO LOOK INTO THIS —
WONDERING HOW HIS NEW WELL IS COMING
11:30 AM
THEN TO CONFERENCE OF COMMITTEE OF FOUR PROTESTING NEWSPAPER ARTICLE WHICH STATED OIL SCOUTS WERE AFFILIATED WITH THE BOY SCOUTS
— I WOULD SUGGEST THAT THIS COMMITTEE BE ENLARGED IN ORDER TO —
1:30 PM
ATTENDS MEETING OF COMMITTEE FIGHTING DECISION OF STATE LEGISLATURE WHICH WOULD REQUIRE A FISHING LICENSE TO SEEK LOST TOOLS — 1½ HOURS!
3:30 PM
STARTS FOR OFFICE, HIS MIND A JUMBLE OF COMMITTEE MATTERS — WISHES HE COULD RETIRE TO SOME DESERT ISLE, AWAY FROM COMMITTEES —
— I HAD JUST FINISHED READING HIM THIS NOTICE OF HIS APPOINTMENT ON A COMMITTEE WHEN HE SOCKED ME!
4:00 PM
LOCKS DOORS, CUTS TELEPHONE LINE AND RESOLVES TO SPEND AT LEAST TWO HOURS ATTENDING TO COMPANY BUSINESS • • •
ROY R. COREY 29

Drawn by Roy R. Corey, Independence, Kansas



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which presented itself to these operators, and is naturally, the third solution which is offered the other operators in the field.

The problem of the disposition of the salt water which eventually will be produced with the oil is one which every operator in the field must face. And, just as each oil field has production difficulties peculiar to itself, the pollution problem in this new field has many individual kinks which should be occupying not only the operators but the land owners who may have to look to the courts for damages, and to some of the operators for payment of judgments. Although no one knows just why it is so, it is often the case that those operators whose financial responsibility is most questionable are often the most lax in safeguarding themselves from suit, by removing the cause of any damage actions which are likely to come up. It is doubtful if there are many developers of town lot sites who would be either in the mood or financially capable of purchasing some farm land ruined by the salt water from their wells. As has been seen, the removal of the water is not a cheap proposition, either.

BUT the water must be removed in some fashion. The land surrounding the new field is fairly level, with the general drainage being to the south and southwest. The rich top soil is underlain with a sandy subsoil, through which water dumped on the ground would permeate the entire region, and do a very considerable amount of damage. In the most active part of the field, the so-called "Golden Triangle" in the west half of 6-26S-1E, there are being drilled some 60 per cent more wells than would be the case were the acreage not broken up into town-lots. While it is considered doubtful if these extra wells will increase the recovery of oil by as much as 20 per cent, when the wells start making water these added wells can be counted on to increase materially the output of that.

And there will undeniably be a great deal of very salty and wet water produced with the oil at some time in the not-too-distant future. Most observers are agreed that the force back of the oil in its natural reservoir in this field is water. None of the wells have had any gas to speak of, the wells flowing very sluggishly after the first head was off. It will be necessary to produce all the fluid the wells are capable of to keep the water pumped off, so that the volume of the fluid which must eventually be disposed of is no small one. It is a problem that will undoubtedly be giving not only the local operators but the land owners and state or county officials some food for thought before very many months have passed.

INDEX TO ARTICLES

Selected Bibliography on Petroleum Technology

Editor's Note—The brief abstracts of current literature printed below are so arranged that they may be cut apart and mounted on 3" x 5" library indexing cards. The indexing numbers assigned bring the cards into logical sequence in the files. The "Decimal Index of Petroleum Technology" gives the key to the articles. This book is published exclusively by NATIONAL PETROLEUM NEWS as a service to its readers. Price $1.00. Abstracts started April 4, 1928.

Kesler, L. W. 111.31

"Oil and Gas Resources of Kansas in 1927"

Kansas Geological Survey Mineral Resources Circular 1.

While this bulletin is devoted chiefly to statistical information on production of Kansas fields and drilling operations in 1927, some brief geological discussion is presented on the pools that were opened in that year.

Barton, Donald C., Udden, J. A., Romer, Alfred S., King, Philip B. and Robert E., Lonsdale, John T., Crawford, David J., Sellards, E. H. and Schoch, E. P. 300.

"Contributions to Geology, 1928"

University of Texas Bulletin No. 2801.

The several authors have contributed sections of this 200 page bulletin, the whole constituting a work that does not deal directly with petroleum, but is of value as a reference work to the petroleum geologist. Dr. Barton treats of the economic importance of salt domes, with some discussion on the petroleum producing salt domes of Texas and Louisiana and of Rumania and Germany.

Bullard, Fred M. 300.

"Lower Cretaceous of Western Oklahoma"

Oklahoma Geological Survey Bulletin No. 47.

Because of recent oil discovery in Oklahoma county, near Oklahoma City, that vast area west and northwest whose geology is not clear has become one of high importance. The author of this bulletin has traced Cretaceous sediments in a number of places in the area, reaching certain conclusions as to the depositional history.

Clawson, W. W., Jr. 111.32

"Oil and Gas Geology of Coal and Pittsburgh Counties"

Oklahoma Geological Survey Bulletin 40-JJ.

The counties treated in this report, one of the chapters on oil and gas in Oklahoma, are in the southeastern part of the state. Both have attracted considerable attention among oil companies in the past two years and several tests have been drilled. Past exploration has found only gas in small quantities. However, testing of the deep sands, on the favorable structures that are known to be present, has not reached the point of removing possibilities of oil production in the two counties.

Power, H. H., 537.

"Relative Propulsive Efficiencies of Air and Natural Gas in Pressure Drive Operations"

Am. Inst. Mining & Metall. Engineers Technical Publication No. 148, Oct., 1928, 18-pages. Reprinted in part in Oil & Gas Journal, Oct. 18, 1928, p. 164. Oil & Gas Journal, October 18, 1928, pp. 53 321-322.

This paper presents the results of laboratory research conducted in apparatus which permitted of measuring the pressure loss of oil-gas mixtures in flowing through a column of sand under a wide range of controlled initial and efflux pressures. Means were also provided for measuring the viscosity of the oil under the test conditions. Both natural gas and nitrogen were used to saturate the oil in successive tests, the latter being presumably indicative of the results that might be secured with air under similar conditions, but without its oxidizing effect. Some of the tests were made with oil containing no dissolved gas. Ninety-three separate tests were made. The results are displayed in graphic form.

The Author concludes that the solubility of natural gas in oil is much greater than that of nitrogen under similar conditions; that increments of dissolved natural gas lower the absolute viscosity progressively, which is true also of nitrogen up to a critical point, beyond which the viscosity is increased. Gas-bubble resistance to flow of oil through the sand appears to be greater in the case of natural gas than in the case of nitrogen. Nitrogen is superior to natural gas as a propulsive agent up to about 200 pounds pressure, beyond which natural gas is superior. Volume for volume, nitrogen is superior to natural gas as a propulsive agent, at all pressures. Bubble resistance is found to be of material consequence and lower viscosities of the oil do not materially assist flow unless gas-bubble resistance be reduced by pressure control at the orifice. At any given saturation pressure, there is a critical point of pressure control where the maximum rate of production is obtained with a saving of gas over what is possible at atmospheric pressure. At another critical pressure, a minimum rate of gas production with the oil may be realized. From an interface between gas and non-saturated oil, natural gas has a tendency to permeate through the oil at a greater rate than does nitrogen.

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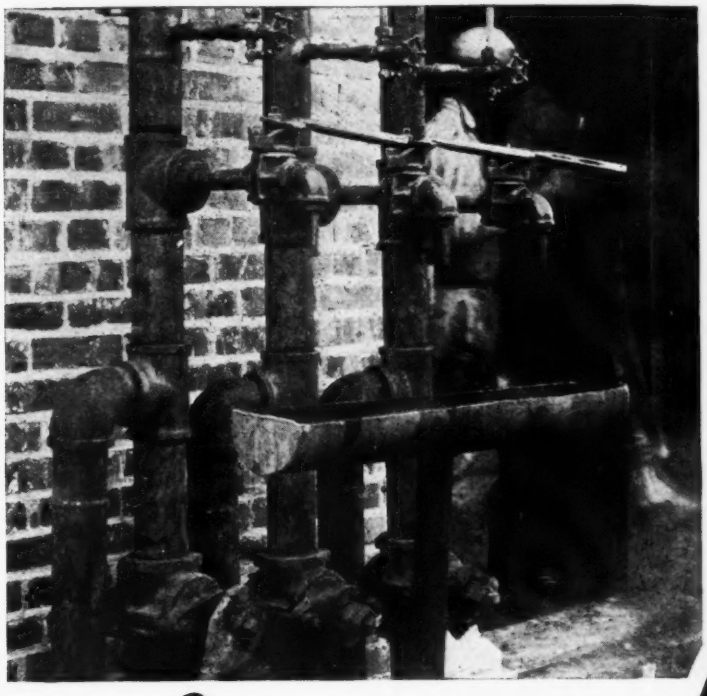

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high pressure gas	*compressor house manifolds*
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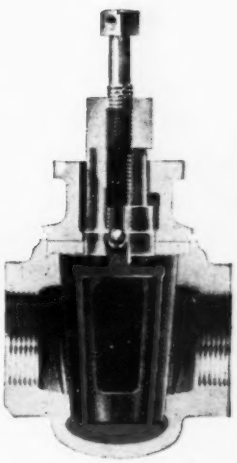

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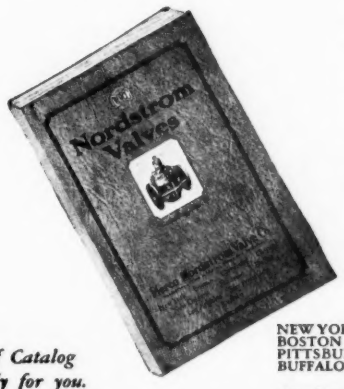

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Should Production Development Costs Be Written Off at Once? No!

Says J. A. Padon*

PRIOR to the World war, accounting, as practiced by the petroleum industry in general, especially the producing end of the industry and to which this article mainly relates, was practically limited to a record of cash receipts and disbursements, and to the so-called "pay-out basis." In fact, the usual attitude of the old Independent producer was that all the accounting information required was what could be kept in the head. There is no doubt but that this method was suitable to the characteristic optimism and imagination of the oil operator of that time in permitting appreciation of values to their dreamed of intrinsic worth.

During the last 14 years, the unusual rise of the petroleum industry from a position of only ordinary importance to possibly the major industry in world-wide economics has likewise resulted in the advancement of corporate organization and procedure on a scale in keeping with the position attained. The high standard of executive administration has been made possible only by the advancement of accounting methods for the industry which today are at least in keeping with the accounting methods for any of the major industries.

The advancement of the industry required, for administrative purposes, accounting facilities that would not only afford an exacting control of current assets and liabilities, but also a control of property, both as to physical value and cost accounting for leasehold and refinery operations. In devising ways and means of accounting for property and leasehold operations, many difficulties were experienced because of the peculiar operating conditions of a producing unit, arising from undivided interests in leaseholds and equipment owned by outsiders through joint venture or partnership arrangements; the transitory nature of leasehold equipment, and the widespread location of operations which, in some instances, for a single corporation covers a good part of the world. Cost accounting for refinery operations enters the sphere of the most difficult phases of that type of accounting, and the degree to which refinery cost accounting has been developed speaks well for the accountants of the industry.

In reviewing the advancement made in accounting for the petroleum industry as a whole, it is difficult to understand why the efficiency attained, to which reference has been made in a general way, is permitted to be utterly destroyed or offset by the inconsistent and erroneous treatment in the accounts of some one-half dozen items, which, although small in number, are major in amounts involved. These items mostly affect the producing end of the industry, and are: Depletion, depreciation, leasehold development costs, leasehold bonuses and rentals, and dry holes on producing properties or in producing areas.

Prior to the enactment of the federal income tax law, little or no consideration had been given by the petroleum industry to the proper treatment in the accounts of depletion, depreciation, and the other items mentioned, and arbitrary practices were followed in giving effect to them in the financial results of operations.

In the enactment of the federal income tax law, special consideration was given the petroleum industry in providing relief provisions which permitted the taxpayer to elect to either capitalize or write off certain items, and obviously one of the two ways permitted would necessarily be contrary to accounting procedure for

*Mr. Padon is a member of Haskins & Sells, certified public accountants, Tulsa.

Mr. Padon Points Out Fallacy in Production Accounting

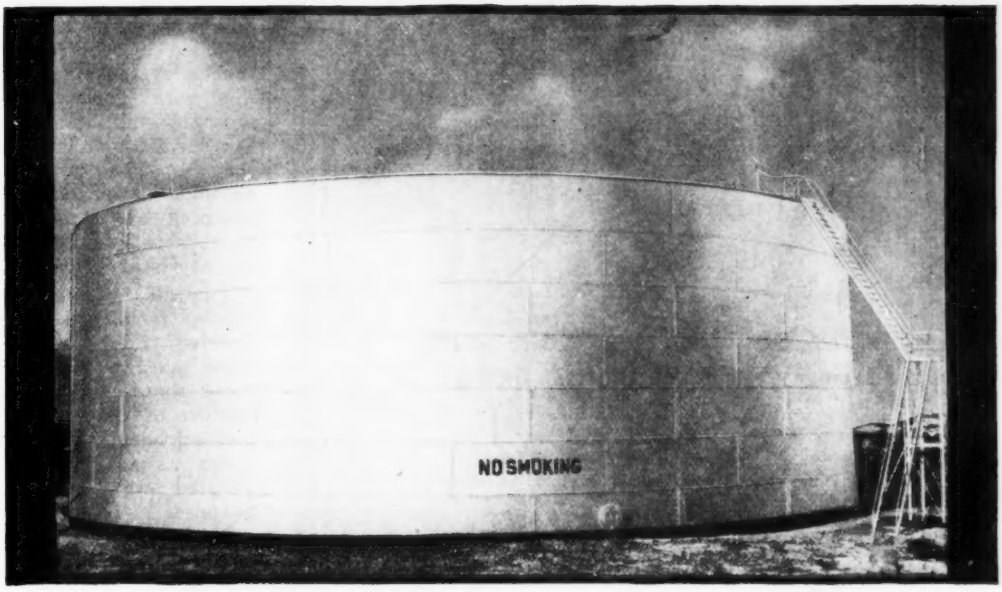
EFFICIENCY attained by our industry has been largely offset or even destroyed by erroneous treatment of the accounts pertaining to depletion, depreciation, leasehold development costs, leasehold bonuses and rentals, and dry holes on producing properties or in producing areas, argues Mr. Padon who is a specialist in oil industry accounting and whose firm audits the accounts of some of the major companies.

The usual treatment of accounts, particularly those of the producing division, is the result of provisions in the federal income tax law which permits capitalizing or writing off certain items each year. Our industry, Mr. Padon writes, took full advantage of the elective relief provision.

No uniformity of method has resulted, Mr. Padon says, and he cites the fact that no two of 27 major Standard and Independent corporations whose financial statements for 1927 he has examined determine financial results of operations on a comparable basis. Uniformity of accounting practice is one of the ends sought by the American Petroleum Institute but so far the institute's committee on uniform methods of oil accounting has not set up a detailed outline of approved practice. Its general balance sheet with chart or accounts and general income account and earned surplus analysis which has already been adopted is preliminary to work on the various items that go into the income account.

Mr. Padon herewith presents reasons why he believes it is as illogical to write off development costs immediately as it is to write off all costs of a building except the cost of the material. The cost of development, he contends, should be written off only through depletion.

Oil Evaporation
REDUCED TO A MINIMUM



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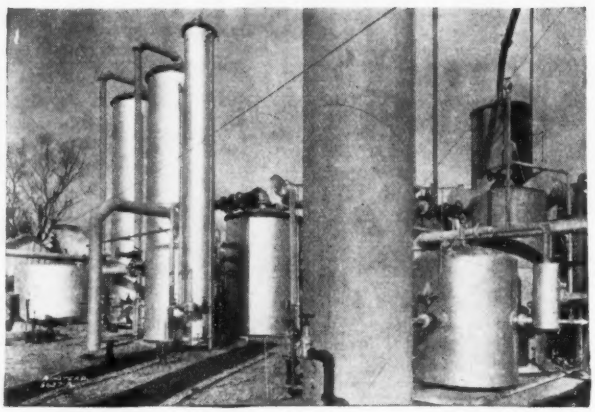

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corporate purposes. The erroneous adaption of these elective provisions to corporate accounting, instead of only to tax accounting, undoubtedly is the primary cause of the conditions to which reference will be made.

The regulations promulgated by the commissioner of internal revenue for applying the federal income tax law included a requirement to the effect that a system of accounting in keeping with good accounting practice must be maintained, and that to obtain deductions claimed from income, they must appear on the books of account. Apparently, this ruling was accepted as meaning that corporate books must be kept accordingly, and thereby started the trouble.

The oil industry, practically as a whole, took full advantage of the elective relief provisions of the income tax law and charged off everything that was permitted by the law because of the high rates of taxation, and apparently no consideration was given as to whether the treatment adopted was proper for corporate purposes in accounting for stockholders' equities. In fact, the treatment in the accounts of the items referred to, resulted in keeping accounts for federal purposes rather than corporate purposes and in conformance with state law.

PRIVATE corporations are all created by the laws of the respective states, and these laws were required to permit a number of individuals to unite their capital for a given purpose, with the right to transfer to others, as often as desired, the evidence issued by the legal entity representing the pro rata share of the capital so contributed, without affecting corporate existence, and, also, without any personal liability attaching to the holders for breach of contracts or torts of the corporations.

In the many sections and provisions which are required to round out the corporation laws of the respective states, it is specifically provided that once a year the affairs of the corporation shall be properly balanced. It is the intent of this provision to acquaint stockholders with the financial affairs and results of operations, from which they may determine the value of their holdings and pass upon the administration of officers and directors. It is also provided that officers and directors may be liable for a breach of faith if it can be proved that erroneous financial information is submitted knowingly to stockholders.

It is the purpose of this article to point out that officers and directors of corporations of the petroleum industry have submitted erroneous financial information to their stockholders because of the treatment in the accounts of the items mentioned. This fact is readily apparent

from a review of 27 published annual statements for the year 1927 of major Standard and Independent corporations of the petroleum industry. These statements indicate that practically no two of the corporations have determined their financial results of operations on a comparable basis.

Some idea of the divers treatments of the items causing all of the trouble may be had from the following:

Depletion (in an instance no provision or charge-off made):

Bases used:

(1) Unit rate per barrel.
(2) Various per annum rates; etc.

Capital or depletable sum (based on cost and appreciation):

(1) Leasehold bonus costs.
(2) Leasehold development costs and leasehold rentals plus (1);
(3) Unamortized leasehold bonus costs, plus leasehold development costs.
(4) Unamortized leasehold bonus costs; etc.; etc.

Depreciation:

Bases used:

(1) Various per annum rates for same type of property.
(2) Unit rate per barrel; etc.

Capital or depreciable sum (based on cost and appreciation).

(1) Plant and equipment including leasehold development costs (see (2) under depletable sum).
(2) Plant and equipment excluding leasehold development costs.
(3) The amount of either (1) or (2) plus the difference between the original cost and salvage value of items abandoned, removed, or sold (both profit and loss and reserve accounts are affected by this difference left in the depreciable sum); etc.; etc.

Development Costs—Capitalized and written off.

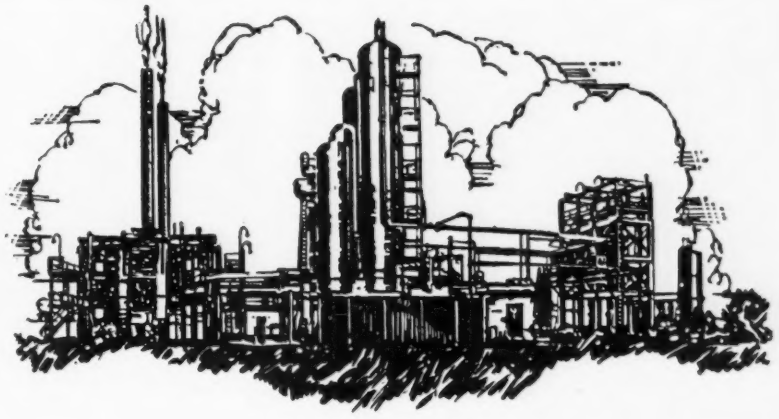
Leasehold Bonuses—Amortized and not amortized.

Leasehold Rentals—Capitalized, written off, and amortized.

Dry Holes on Producing Properties or Areas—Capitalized and written off.

It is obvious from the foregoing inconsistencies, that major differences must result in arriving at the financial results from operations, as the respective items are always important as to amounts involved.

From an accounting point of view, there is no more reason for writing off the cost of development of a leasehold than there would be for writing off that part of the cost of erecting a building representing the cost of all items except the prime cost of material. The excuse usually given for following that practice is the hazardous nature of the operation,



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and for conservatism. That excuse is illogical and inconsistent because the cost of a developed leasehold, or leasehold bonus, is not written off except through depletion, and, if the lease is proved valueless, or becomes valueless, the cost of the leasehold would have no more value than the cost of development, or conversely, the cost of development is as much a part of the cost or value of a producing leasehold as the bonus paid for the leasehold. For that matter, the loss in salvaging material and equipment from a developed leasehold will average not less than 50 per cent of the original cost, so that, based on the same reasoning upon which development costs are written off, 50 per cent of the amount expended in a year as the prime cost of leasehold material and equipment should also be written off. It would appear that, based on this arbitrary treatment in the accounts of an item as important in arriving at the financial results of operation as are leasehold development costs, stockholders would be justified in questioning the action of officers and directors in sanctioning or approving such a policy.

WHY the cost of undeveloped properties, or undeveloped leasehold bonuses, is amortized over the term of the lease agreement is another practice difficult to understand. Oil and gas leaseholds are acquired on account of the possible discovery through development of oil and gas reserves. The asset does not diminish in value through the elapse time. It is true that operations adjacent to or in the district of an undeveloped leasehold may add or detract from the potential possibility of discovery of oil or gas reserves, but the saying, that the area proved by development is limited to the width of the drilling bit, has so frequently been applicable to drilling operations that it may be accepted as a truism. Therefore, a profit is not realized or a loss sustained until the property is developed and proved productive or nonproductive, or unless title to the property is forfeited.

The same reasoning applies, in effect, to leasehold rentals. The lease agreement usually provides an annual penalty for deferring development, based on a certain amount per acre, for each year, throughout the term of the lease agreement. It is obvious, as in the case of the cost of leasehold bonuses, that the amount expended as rentals on undeveloped properties is for potential oil and gas reserves and should represent a part of the value of that asset until a definite profit or loss is realized or sustained.

The undeveloped acreage of a producing corporation is its most valuable and necessary asset, and, if anything, usually represents a value far in excess of cost. To illustrate the unfairness to stockholders in amortizing the bonuses paid, the following is cited: If $100,000 were paid for an undeveloped leasehold, and the lease agreement provided for drilling within five years, or forfeiture, and it were developed in the fifth year and produced, the income realized from the production would only be charged with $20,000 of the actual cost, and the stockholders in effect then would benefit by $80,000, to the detriment of those stockholders who retained their holdings during only the amortization period.

The cost of dry holes on a proven leasehold, or in a proven area, undoubtedly should be capitalized as representing a part of the cost of the discovered oil or gas reserves. They define the producing area and are truly a part of the cost of development. The cost of dry holes on a leasehold or area proved nonproductive, of course, should be written off, as the asset is valueless and a loss is sustained.

It may be said that there are two bases for accounting; original cost, and reproductive or present values. But until the advocates of reproductive or present values present a more practicable basis for giving effect to that theory, accounting must continue to be based on cost. However, there are businesses which will permit of accounting on the basis of present values, but the petroleum industry is not one of them.

The ultimate purpose of corporate accounting is to determine the amount, if any, in accordance with law (state law not federal law) that may be returned to stockholders. For this purpose, the ideal condition would be a venture that could be entered into for profit and consummated within one year. In that event, it would only be necessary to obtain the difference between the gross return and the cost.

J. J. Allinson
Who will open London office for Arthur G. McKee & Co.

Instead of the ideal condition, however, there exists the condition of corporations with practically perpetual lives and with concomitant operations. Further, to make the problem more intricate, it is usual for those corporations with capital stock that is widely held to have a large annual turnover or change in stockholders, and in equity or fairness to each stockholder the book value of the outstanding stock should be determined at least once a year in a manner which will not be deterimental or unduly favorable. To obtain this effect, financial results from operations must be determined on the basis of profit or loss when and as realized or sustained; or cost to follow income to the extent that income represents the cost of outgo of plant property, oil or gas reserves, material, supplies and equipment, etc., plus profit. It is only in this manner that accounting fairly and equitably deals with stockholders' equities at times specified by law, or at any other time.

THAT the petroleum industry is not dealing fairly with its stockholders has already been shown by the inconsistencies gleaned from the published annual statements for the year 1927 of 27 of the major Standard and Independent corporations. That this condition is serious will be indicated by specific conditions obtained from the annual statements and from other available information.

One of the corporations, the annual statement of which was among those of the 27 reviewed, had, up to two years ago, followed the policy of capitalizing the cost of leasehold development and other similar items, but changed its policy and commenced to write off those items, and excused the change of policy by stating that it was being done to conform with the federal income tax law. By this change, the corporation in one year reduced its surplus available for dividends from approximately $19,000,000 to $3,000,000, and then from the latter figure to a deficit of approximately $2,000,000. In these two periods, approximately $20,000,000 of development costs were written off, and the stockholders suffered a decline of approximately 30 per cent in the market value of their holdings.

A further evidence of the unfairness to stockholders in determining the financial results of operations, as shown by their annual statements, is apparent from the fact that 10 corporations that charged off leasehold development costs show a net income available for dividends, before depletion and depreciation, of $227,000,000, and $91,000,000 after, from which amount was deducted $51,000,000, representing leasehold development costs

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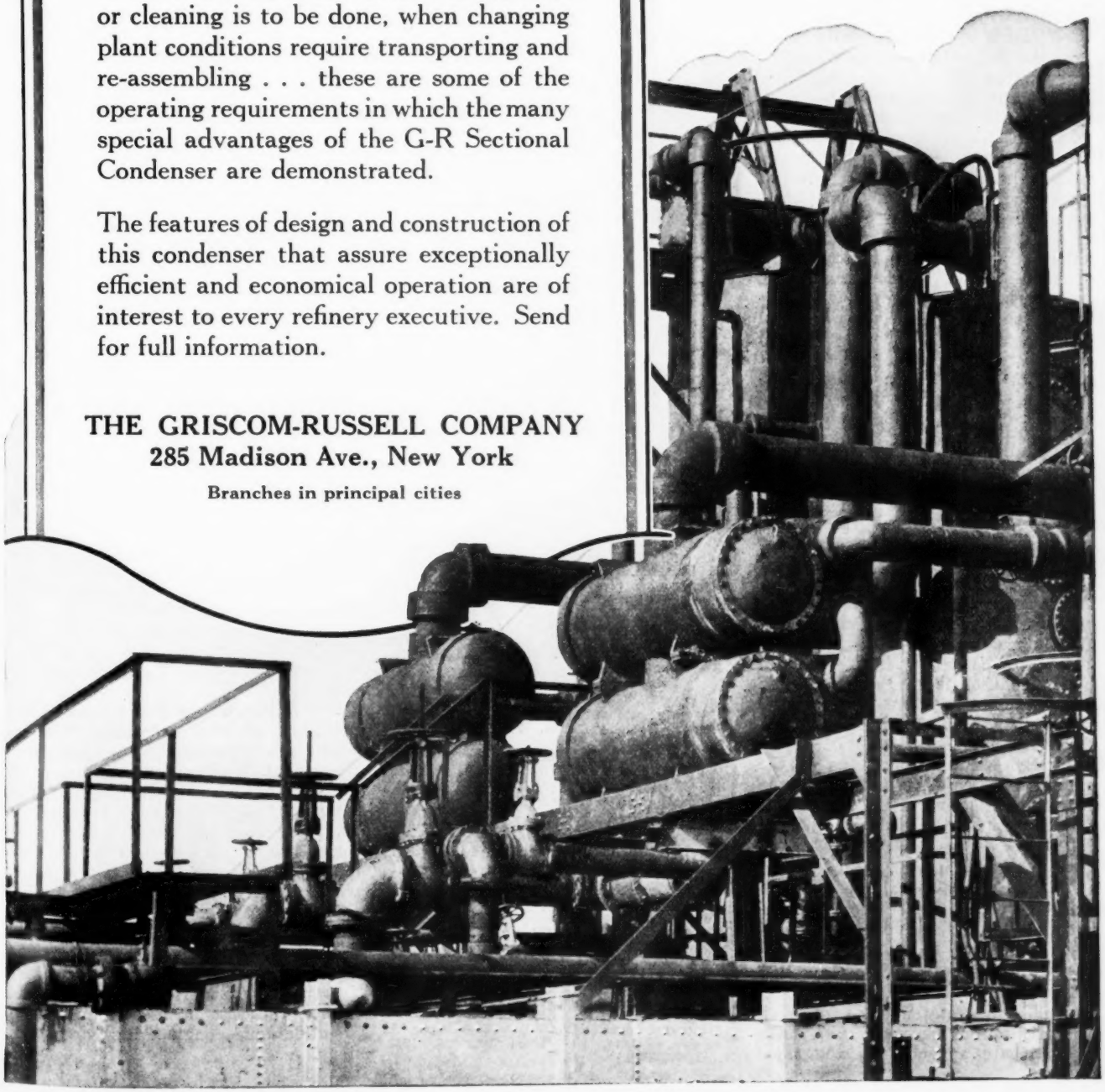

written off, leaving $40,000,000 available for dividends. Whereas, 12 corporations that capitalized leasehold development costs show a net income available for dividends, before depletion and depreciation, of $157,000,000, and $73,000,000 after, and available for dividends.

It is apparent that the group of corporations that capitalized development costs had $33,000,000 more available for dividends, even though the net income before depletion and depreciation is $70,000,000 less than the amount available before depletion and depreciation of the group of corporations that wrote off leasehold development costs. It will be seen from this that stockholders of the respective groups at Dec. 31, 1927, were not treated with equal fairness. A familiar funny saying has an ending, the words of which may give a reason for this unfair condition. These words are quoted as follows: "There must be something wrong."

IT WOULD be a fair estimate, based on the $51,000,000 of development costs written off during 1927, that possibly $100,000,000 could be reinstated in the surplus accounts as of Dec. 31, 1927, of those corporations writing off that amount, as representing an addition to the cost or book value of the asset of unrecovered oil and gas reserves at that date. But the accounting method used by those corporations that have written off leasehold development costs, does not provide charging any portion of the $100,000,000, which in reality is a part of the cost of oil and gas reserves at Dec. 31, 1927, against the income to be subsequently realized from the recovery of these reserves, and the stockholders then in effect will benefit to the detriment of those stockholders in effect at Dec. 31, 1927.

The public accountant is not without the pale of serious criticism as to the conditions referred to for passively ignoring them or possibly for being in ignorance of them. It is difficult to admit this, but as the profession is founded on high ideals, and the facts convict, it probably will have to be admitted. The reason for the condition is that at least some of the profession have avoided the responsibility that should be assumed in passing upon the items of depletion and depreciation both as to the manner in which determined and the adequacy of the provision, and, also, in passing upon the propriety of the write-off of capital items.

The evidence on which this admission is based in also contained in the annual published statements referred to, and, although the defense should not be compelled to testify, sufficient facts will be given to avoid dealing in generalities.

The published statements of two oil corporations for the year 1927, have the certificate appended of the same public accounting firm. Each of these corporations determined its financial results of operations for the year in a different manner. The important difference in the bases used is that one wrote off against income, and the other capitalized millions of dollars of development costs, and yet the audit certificates state that the respective income accounts truly stated the amounts of net income.

Also, a published consolidated statement of a holding corporation and a number of subsidiaries, and, also, the published statements of several of the subsidiaries, all have the certificate appended of the same public accounting firm. Each of the corporations within the consolidated group determined the financial results of operations in a different manner, viz.: Development costs were capitalized and also written off; depletion was provided on a unit cost per barrel basis, and also, on a straight line rate per annum basis; depreciation provided on a unit cost per barrel basis, and, also, on a straight line rate per annum basis and at rates different for the same class of property; and leasehold bonuses were capitalized and also amortized, and yet again the certificates of the public accounting firm state that the consolidated net income of the group and of the subsidiary corporations, respectively, are correct.

A more amusing paradox could not be stated by the illustrious English writer, G. K. Chesterton. But as far as the profession is concerned, it could or should be said in truth that "It may be comedy to some, but to the public accountant it is a tragedy."

NEW PATENTS

Prepared by R. E. Burnham, patent and trade-mark attorney, Continental Trust Building, Washington, D. C., from whom copies may be obtained at the rate of 20 cents each. State number of patent and name of inventor when ordering.

January 22 and 29, 1929

REFINING

Process of making by-products from inactive and inert oils or gases—Charles S. Palmer, Pittsburgh, Pa. Filed Sept. 28, 1921. No. 1,699,627.

Lubricating composition and method of making it—James W. Finlay, University City, Mo., assignor to Pierce Petroleum Corporation, Wilmington, Del. Filed Apr. 13, 1927. No. 1,699,961.

Process of utilizing carbonaceous material—Daniel Pyzel, Oakland, Calif., assignor to Simplex Refining Co., San Francisco. Filed Aug. 25, 1920. No. 1,699,989.

Process of refining mineral oil—Henry Blumberg, jr., Los Angeles, Calif. Filed Jan. 12, 1927. No. 1,700,347.

Treating hydrocarbon oils—Frank W. Hall, Port Arthur, Tex., assignor to Texas Co., New York, N. Y. Filed Feb. 23, 1926. No. 1,700,479.

Apparatus for combining natural gas and hydrocarbon oil for the production of gasoline—Lester S. Worthington, Casper, Wyo. Filed Jan. 22, 1924. No. 1,700,556.

Process for recovering oils from emulsions. Samuel W. Cole, Tulsa, Okla. Filed Dec. 17, 1924. No. 1,700,627.

Mineral-oil vaporizer—Arthur E. Pew, jr., Bryn Mawr, Pa., assignor to Sun Oil Co., Philadelphia, Pa. Filed June 19, 1925. No. 1,700,709.

PRODUCTION

Pumping mechanism for oil wells—William F. Reschke, Wichita, Kans. Filed Oct. 13, 1925. No. 1,699,675.

Well-pump—Kaspar Warmuth, San Fernando, Cal. Filed Dec. 1, 1926. No. 1,699,726.

Sucker-rod—Erastus J. & Don C. Musgrove, Corsicana, Tex. Filed June 30, 1927. No. 1,700,070.

Well-tube-coupling mechanism—Horace G. Johnston, Corsicana, Tex., assignor to American Well & Prospecting Co., same place. Filed June 20, 1925. No. 1,700,291.

Well-swab—Ivan C. Bell, Dallas, Tex., assignor to Guiberson Corporation, same place. Filed June 13, 1927. No. 1,700,305.

Letting-in tool for oil and gas well appliances—Patrick H. Mack, Bradford, Pa., assignor to Oil Well Supply Co., Pittsburgh, Pa. Filed Jan. 29, 1924. No. 1,700,324.

Gas-control attachment for packers—Patrick H. Mack, Bradford, Pa., assignor to Oil Well Supply Co., Pittsburgh, Pa. Filed Sept. 24, 1924. No. 1,700,325.

Measuring device for oil wells—Casper L. Redfield, Chicago, Ill. Filed May 26, 1923. No. 1,700,336.

Pump-plunger—Ellsworth Gray, Houston, Tex. Filed Mar. 6, 1926. No. 1,700,568.

MISCELLANEOUS

Process of making forged chambers—Walter M. Cross, Kansas City, Mo., assignor to Gasoline Products Co., Wilmington, Del. Filed Oct. 21, 1923. No. 1,699,688.

Lubricant and method of making it—Joseph H. James, Pittsburgh, Pa. Filed July 13, 1920. No. 1,700,055.

Grease and method of preparing it—Joseph H. James, Pittsburgh, Pa.

Cork-lined gasoline bibb—Philip Mueller, Decatur, Ill. Filed Oct. 17, 1925. No. 1,700,207.

Prevention of evaporation losses—Harold V. Atwell, Whiting, Ind., assignor to Standard Oil Co. of Indiana. Filed Apr. 1, 1927. No. 1,700,362.

Automobile motor cooling oil—Robert E. Wilson, Chicago, Ill., assignor to Standard Oil Co. of Indiana. Filed Apr. 21, 1925. No. 1,700,392.

Pioneer in Welding Dies At New York

NEW YORK, Feb. 8.—Samuel Wylie Miller, Consulting Engineer of the Union Carbide & Carbon Research Laboratories, Inc., of Long Island City, N. Y., well known both in the United States and in Europe as a pioneer in oxyacetylene welding and an authority on its application, died on February 3rd at his home in Hollis, Long Island, N. Y., at the age of sixty-two.

Mr. Miller was a director and past president of the American Welding Society, a director of the American Bureau of Welding and chairman of the Oxy-Acetylene Committee of the International Acetylene Association. As a member of the Welding Subcommittee of the Boiler Code Committee he was prominently identified with the American Society of Mechanical Engineers. He was an active member of the American Institute of Mining and Metallurgical Engineers, American Society for Steel Treating, British Iron and Steel Institute, Institute of Metals and other scientific and engineering organizations.

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Visiting Around the Refineries

By Paul Truesdell

National Petroleum News

A. K. WHITELAW, vice president of the Standard Oil Co. of Kentucky in charge of manufacturing, has been "visiting around the refineries" himself lately. He recently returned home to Louisville from a tour of inspection which included the refineries of the Standard Oil Co. of Indiana, at Wood River, Ill., and Casper, Wyo., and the Standard Oil Co. of Kansas at Neodesha, Kans. It is not known whether Mr. Whitelaw was inspecting the equipment at these refineries to get pointers for new installations at his own plant or whether he was merely visiting.

Mr. Whitelaw probably met many old friends on his trip because he is a veteran of the Standard Oil Co. of Indiana himself, having received his early training in the refining business under Dr. Burton and his associates.

* * *

AS THE oil refining industry develops in Europe it looks as if it is going to be American refinery engineers that will install most of the equipment for it. American contracting companies have built and are building considerable refinery equipment in various parts of Europe. In England, the Anglo-Persian refineries are using a lot of American equipment; there has been considerable refinery construction in Roumania and Russia.

One refinery engineering company and at least one cracking process company have maintained London offices for a long time and now another company is sending a well known refinery engineer to London to be in direct charge of its European work.

* * *

IT SEEMS that there is need for a good deal of study as to how to prevent flashing of light oils in a refinery. A disastrous fire was caused about a month ago in the Carnegie Refining Co.'s plant by the flashing of a sample of naphtha being drawn from a filter. The fire and its effects are described elsewhere in this issue.

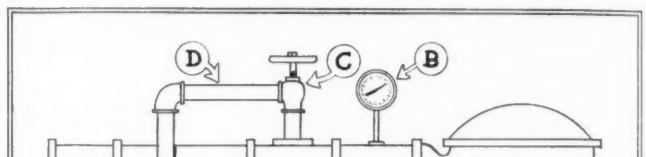
There is much drawing of samples of gasoline and naphtha in refineries. Usually they are drawn from a small pet cock into a metal can of some sort. Flashes are rare but when one occurs it often starts a very bad fire. Why a gasoline stream will flash once in a hundred times and remain perfectly safe the other 99 times is a problem.

Static is usually blamed for such accidents. Does the stream of liquid falling some distance into a can generate an electric current which sparks and sets off the inflammable liquid? Would drawing a stream into a glass container instead of a metal one get away from the danger?

I am told that if a rag is soaked in gasoline and then snapped like a whip lash, about once in a hundred times it will flash into flame and the other times it will be as dead as if wet with water. I have not found anybody able to explain this phenomenon. But anybody who can explain it and explain the occasional flashes from streams being drawn into containers will be able to prevent a good many refinery fires and perhaps save some lives.

BLOWING out of pump valves through inadvertently pumping against a closed valve in a pipe line is one of the minor but sometimes expensive annoyances in a refinery. Somebody is always likely to start up a pump without taking the pains to see whether the line into the tank, still or whatever into which he wishes to pump is open.

Various refinery operating men have various ways to prevent the distressing consequences of such stunts. At



the plant of the Kendall Refining Co., at Bradford, Pa., a by-pass is fitted between the suction and discharge lines on each of the important pumps in the refinery.

A T is screwed into the discharge line near the pump. In the T is fitted a valve connected to a small line leading across into the suction line. Opening and closing of the valve is controlled by a spring set to open at a pressure of 60 pounds. A gage fitted in the line between pump and T shows the pressure.

If the pump is started against a closed valve, pressure naturally builds up. When it reaches 60 pounds the by-pass valve opens and the oil merely flows over into the suction line to go through the pump again. The gage serves as a reminder. If the pumper looks at it and sees pressure building up, that may remind him to open the valve before it becomes necessary for the by-pass valve to function.

A sketch of the device is shown above. A is the pump, B the pressure gage, C the by-pass valve and D the by-pass line.

* * *

EXTENSIVE construction work is under way at the plant of the Prudential Oil Corp. in Baltimore. This consists of two 2000-barrel Cross cracking units; one 10,000-barrel pipe still for crude distillation and two pipe stills of 4000-barrel capacity each to handle reduced crude. These latter units are reported as nearly completed. The Prudential has several Dubbs cracking units, I believe, in addition to the new equipment being installed. M. W. Kellogg Co. is the contractor doing the work.

Flash of Naphtha Sample Starts Fire Which Destroys Filter House

By Paul Truesdell
N. P. N. STAFF WRITER

THE flashing of a tiny stream of wash naphtha being drawn from the sampling cock in the bottom of a filter at the plant of the Carnegie Refining Co., in Carnegie, a Pittsburgh suburb, caused a fire that left most of the filter house a mass of junk, ended all filtering operations until the plant can be rebuilt and cut in half the capacity of the refinery to produce goods.

That the fire did not wipe out the entire refinery and the adjoining village as well, is due largely to the faithfulness, diligence and good judgment of the plant fire fighters who rose to the emergency, although they had comparatively little formal training as a fire brigade.

What caused the flash is unexplained. The sampling was being done, it is reported, in exactly the same manner that it had been done thousands of times before in this and other refineries. There was no departure from regular practice and there were no special circumstances or unusual conditions that would account for it, according to the management.

The flash is laid to static, which everybody fears but which probably nobody thoroughly understands. The result was a direct property loss of about a quarter of a million dollars. The loss in business due to reduced capacity to deliver goods cannot be estimated.

In order to comprehend the plant layout and understand the course of the fire, it is necessary to look at the accompanying diagram.

The building in which the fire occurred was about 100 by 350 feet. It was of steel frame and brick construction, built on the unit system in bays, each 16 feet long.

The roof was of the double monitor type, covered with corrugated steel sheets. The building was two stories high and the second floor was of three-inch planking tongued and grooved together. The sides of the structure faced east and west while the ends faced north and south. The building was divided lengthwise by a wall down the middle.

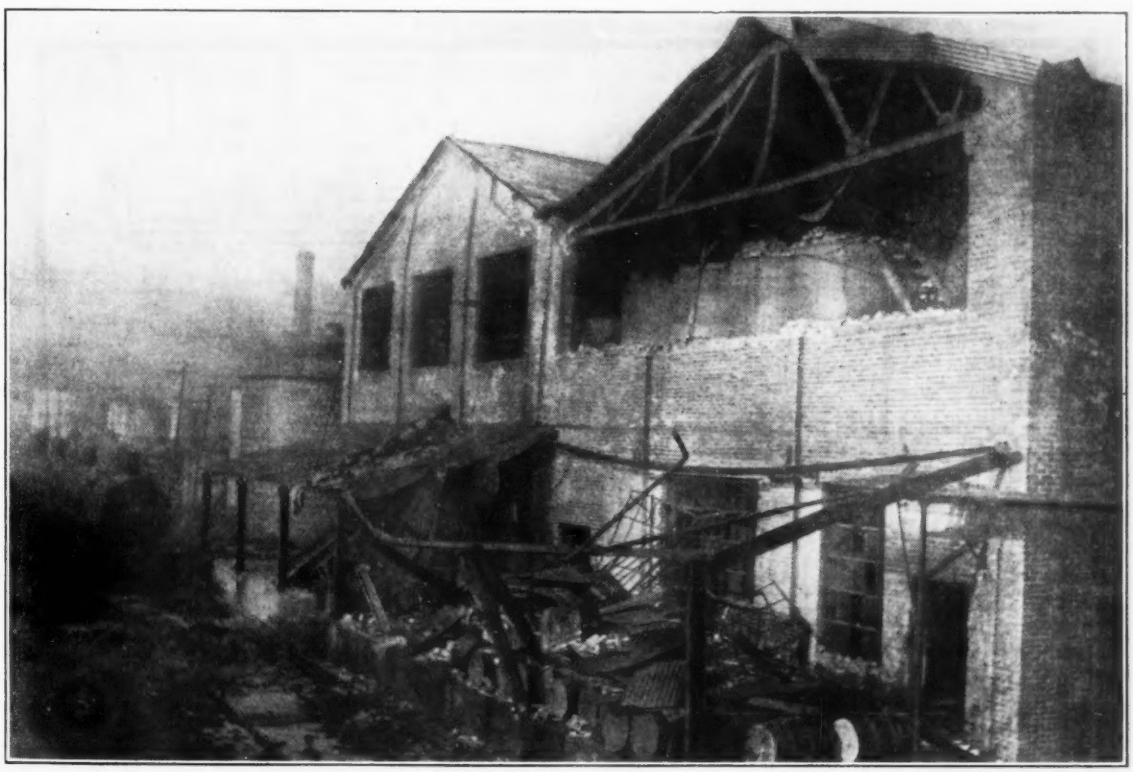
Under this one roof, as the diagram shows, were the filter plant, barrel house, clay roasting and cooling plant, compounding plant and barrel storage, together with charging tanks and pumps, running tanks, finished oil tanks and so forth.

From the second floor the filters were charged and there also the new clay was stored. The irregular line drawn through the diagram near the north end shows what is left of this equipment.

Now for the fire itself. It happened on Christmas Day. As is usual on that day, there were very few men on duty at the plant, just as few as could carry on the necessary work.

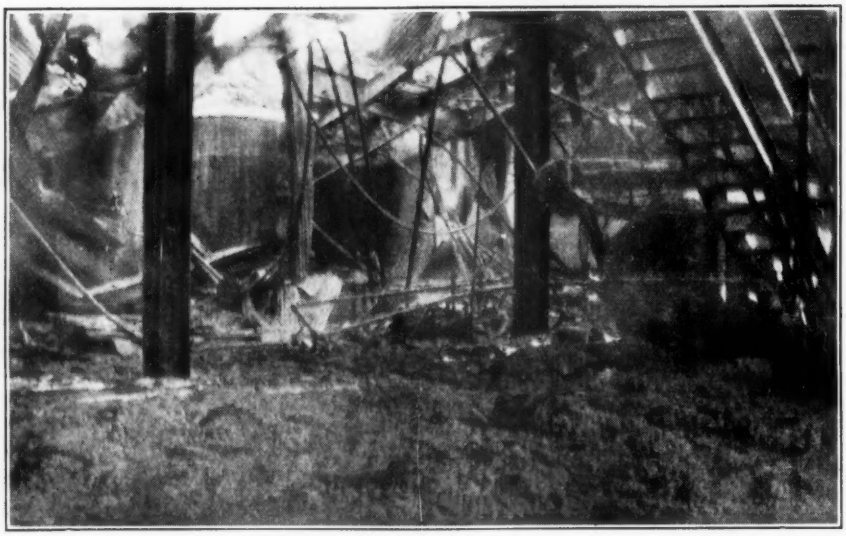
IT WAS 9:30 in the morning when the fire broke out. Filter No. 30, shown in the diagram, had been filtering wax and had been run out. Naphtha had been pumped in to wash it out. The man on duty in the filter house opened the pet cock on this filter and drew out a sample into a metal can.

There was a flash. The gasoline in the measure spilled on the con-



Showing what fire can do to steel and brick construction. Note caved in wall and buckled roof. Carnegie Refining Co.

crete floor which was more or less covered with oil, and blazed to the ceiling. The workman jumped back as the gasoline blazed up, but quickly realizing the danger of leaving the sample cock of the filter open and the stream running out, he ran back and shut off the cock. In doing this he burned his hands somewhat.



Steel tank supports doubled up under the heat and drop storage tanks during the fire. Carnegie Refining Co.

The fire had enough of a start so the compartment in which it started was a furnace by that time. This compartment housed 30 filters of 6-ton capacity each. They were set in batteries of five, each battery being bricked in, with the sample cocks coming out through the brick wall on one side and the manheads for dumping the earth through the walls on the other side.

The filter house man, after shutting the sample cock, gave the alarm and the man on watch in the boiler house blew the fire signal whistle. Robert Burr, superintendent of the refinery, was at his home nearby and heard the fire whistle. He notified J. Earl French, sales manager, and both were on the job within a few minutes.

Six or seven fire companies from surrounding suburban towns and from Pittsburgh responded to the fire alarm and the fire was pronounced out at 3:20 p.m.

Most of the firemen and their equipment went home and the refinery officials and men went back to

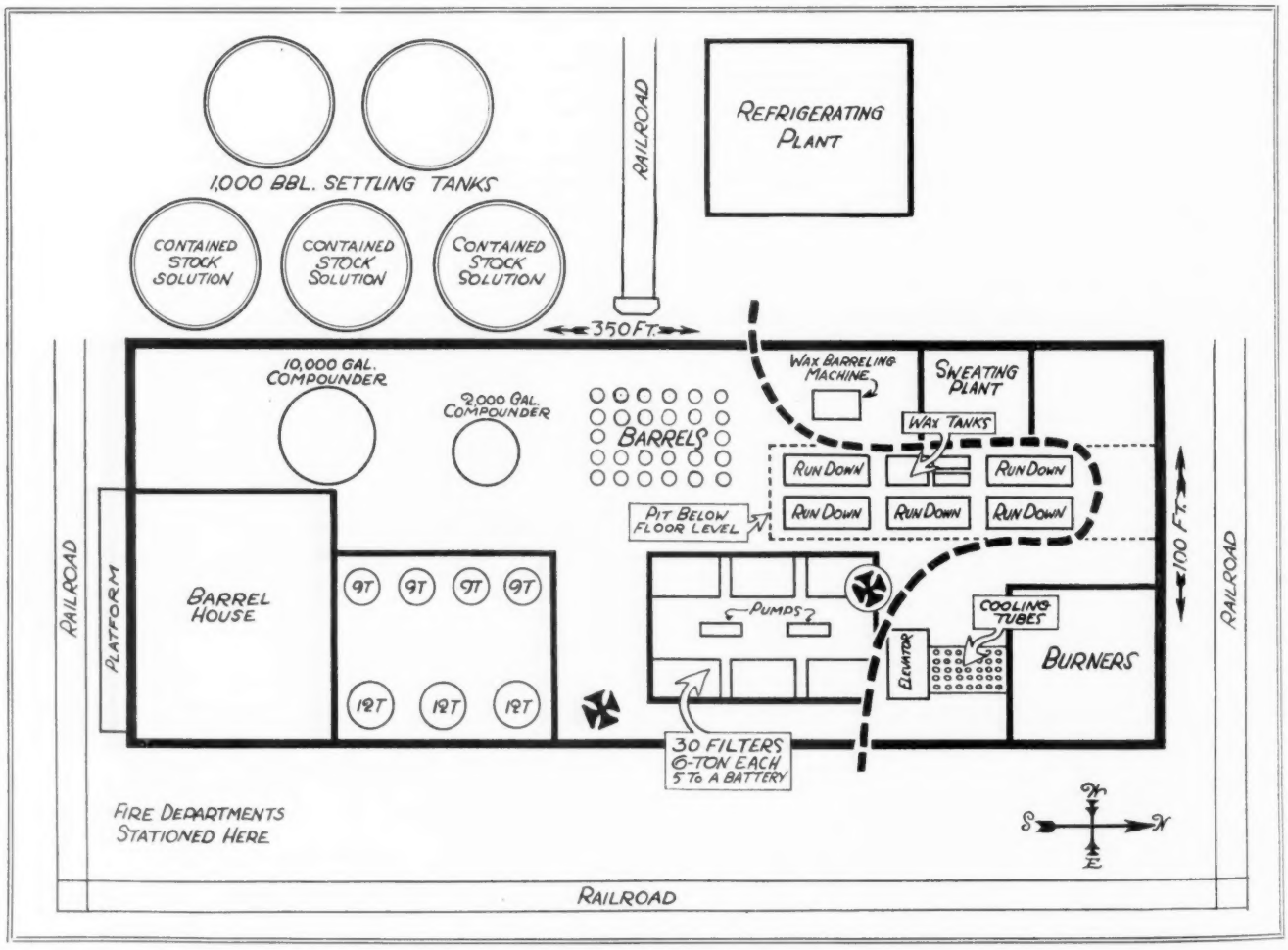


Diagram of building where fire occurred at Carnegie Refining Co. The cross surrounded by a circle near the north end of the building is at Filter No. 30 where the first fire started. The cross close to the east wall shows where the fire was apparently extinguished at 3:30 Christmas afternoon. The heavy dotted line near the north end shows the limits of the fire's depredations. That part of the plant lying to the north of the dotted line suffered little or no damage. Seven filters were housed in the compartment adjoining the barrel house, four of them being of 9-ton capacity and three of 12-ton capacity.

interrupted Christmas festivities. The point marked "first fire stopped here," on the diagram shows where it was conquered in the afternoon, but about 11 o'clock Christmas night the fire broke out again.

It is believed that smoldering embers must have been left in the compartment where the fire started. All the filters were full but most of them were soaking, preparatory to starting their runs the day after Christmas. They were charged with various products, neutrals, steam refined stocks diluted with naphtha and bright stock solution. The contents of most of the filters were highly inflammable.

Of course, running lines had been burned off in the earlier fire. The filters not being on stream, the valves on the running lines were closed. It is thought that some of the valves had been loosened but that the flow of the oil from the lines had been prevented by clogging of the pipe with earth.

According to this theory, probably the head of oil in one of the filters at last forced the obstruction out of the pipe and the oil ran out on the glowing coals. At any rate, another furious fire was raging in a few minutes. All the refinery men were called back on the job and alarm after alarm was sent in for outside help until there were 13 fire companies with four pumping engines fighting the fire.

THE outside firemen did not enter the plant but trained their streams on the fire from across the railroad tracks at the south end of the plant. The blaze having started in the compartment which was the scene of the earlier fire, traveled southward with a rush. When the fire started there were several cars of oil on the plant tracks, including two cars of kerosene. A Pennsylvania railroad switch engine hauled these out of the danger zone.

The plant was well provided with city water lines and fire plugs but when four outside pumping engines started drawing on the water mains, they reduced the pressure to the point that the plant lines were almost useless.

It was the second fire that threatened more dire results than the first one, and it was here that the work of the plant fire fighters under French and Burr did their best work.

Right alongside the west wall of the filter house at the south end, are three cold settling tanks with capacity of 1000 barrels each. These tanks were all filled with cylinder stock diluted with 60 per cent of naphtha. The tanks are within two or three feet of the wall of the filter-house.

The first move when the fire began rolling toward these settling tanks was to fill all the space in the tanks

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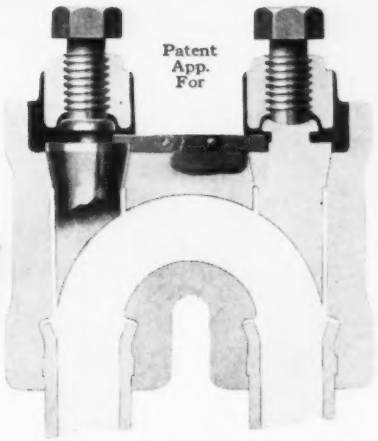

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with steam. The next was to turn every available stream of water on the tank walls and keep them there. Outside firemen and plant firemen played streams constantly on these tanks while the flames licked out through windows and through collapsing brick walls. While streams were trained on the sheathing of the settling tanks, their contents were being pumped out to distant storage.

The course of the fire was punctuated by the frequent reports of bursting steel barrels, of which there were a number in the plant. Most were empty or nearly so, giving plenty space for the generation of vapors.

Another hazard which caused grave worry for a time was the gasoline storage. Horizontal tanks with a capacity of 400,000 gallons of gasoline are housed in a building about 150 feet from the filter house. Connections were made and men stationed awaiting the word to pump this gasoline into the crude storage tanks farther away if it became necessary but the fire was controlled in time to avert the need for this.

The second fire worked its way southward into another filtering compartment containing three 12-ton and four 9-ton filters, destroying them. Rundown and storage and charging tanks were destroyed, as was the compounding department and the barrel house.

THIS was a building fire more than an oil fire. The large open spaces in the building made use of foam impossible, but foam was used to some extent in the tanks. The foam powder had been stored in two different places in the refinery and the wisdom of this was demonstrated because one batch of foam powder was made inaccessible by the first fire.

When the water pressure was reduced too low to be effective, the plant officials induced the officers of three fire companies to back their engines down into the mud on the banks of Chartiers creek which runs back of the plant, so their pumps could take suction from the creek.

The second fire was pronounced out at noon on Dec. 26. A third fire broke out at 3 o'clock on the afternoon of Dec. 26 but this was put out with little trouble in about half an hour.

Not only did all the 55 men employed at the refinery turn out and fight the fires but the girls employed in the office went out to the plant too and made coffee and sandwiches for the fire fighters.

The fire stills, steam stills, agitators, wax plant and other parts of the refinery were comparatively undamaged by the fire. The clay roasting plant, which consists of a Herreshoff clay roasting furnace and four Paris roasters, was little damaged.

Lessons From Carnegie Refining Co. Fire

SAMPLES of gasoline being drawn from a filter or look box into a metal container may flash without apparent cause.

Foam powder and other fire fighting materials should be stored in more than one place in the refinery. If all in one place, the fire may make it impossible to reach them.

Refineries should have a source of water supply, if possible, independent of the city service for fire fighting. Special pumps should also be installed to furnish water from this emergency water system in case of fire.

After the fire is apparently out, always leave enough men on the job and enough equipment connected and ready for instant use to prevent another outbreak. Close watch should be kept of the ruins for at least 24 hours after it is apparently out.

Have the refinery force well trained by frequent fire drills to conquer fire quickly if it occurs.

Hose connections used by city fire departments should be standardized. All fire hose is 2½-inch, but the threads of connections vary widely. Among the 13 companies on duty at the Carnegie fire there were three different types of threads. This made necessary the use of adapters and valuable time was lost in hunting for the adapters.

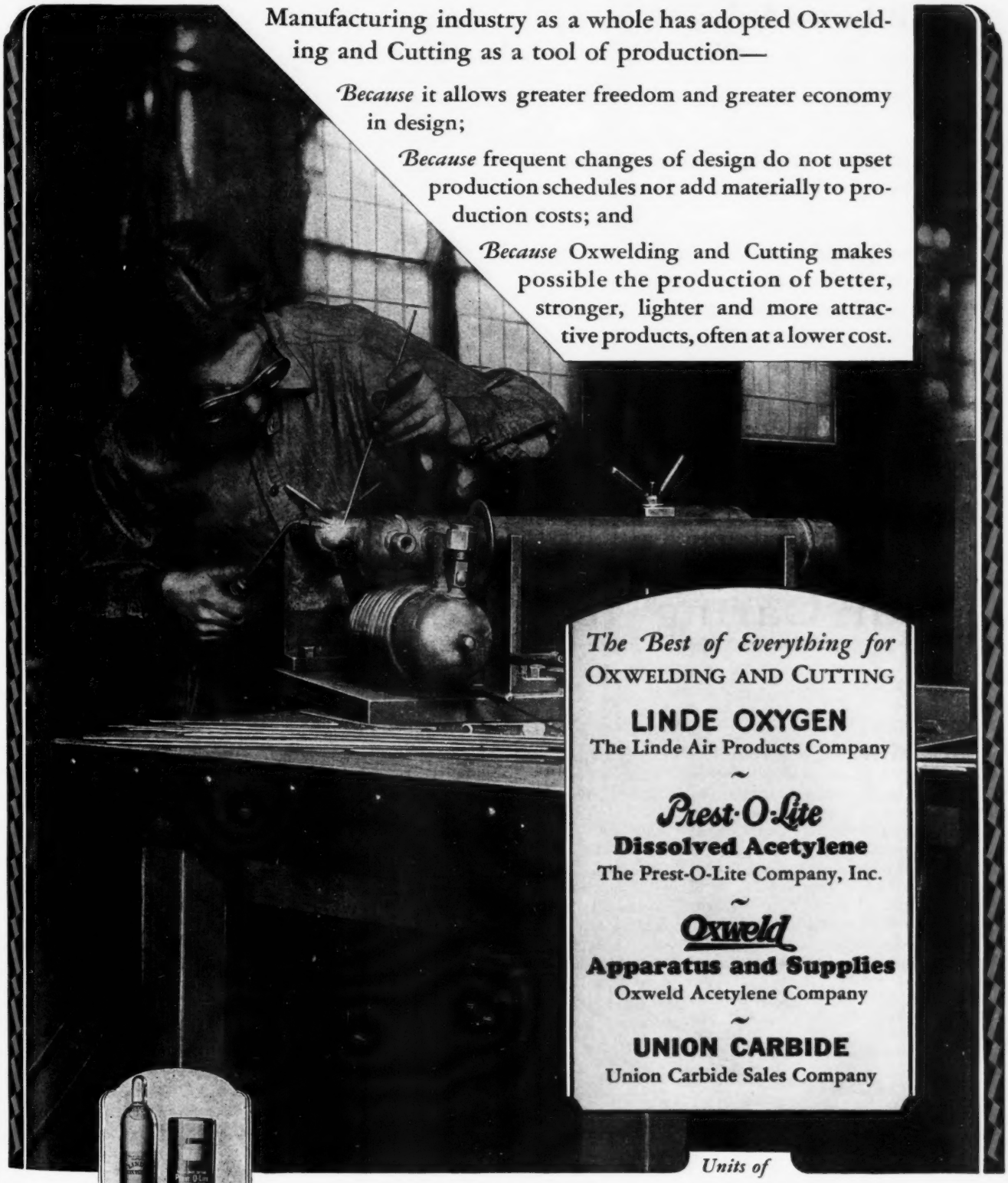
When a number of departments of a refinery are housed in a single building or placed too close together, the chances of the plant being seriously crippled in case of a fire are greater than when the departments are in separate buildings or are far enough apart so the fire can be confined to the department in which it starts.

The plant has 105 tons of refrigeration, being of the York compression type, wax filter presses, sweating equipment and so forth.

It produces under normal conditions gasoline, kerosene, finished motor oil, bright stocks, steam cylinder stocks, neutrals, wax and fuel oil.

A wrecking company is now busy clearing away the wreckage while in the office the officers are busily at work with H. S. Bell, their consulting engineer, who is designing a new filter house of increased capacity which is to rise on the site of the one destroyed.

Don't hesitate—take this advantage



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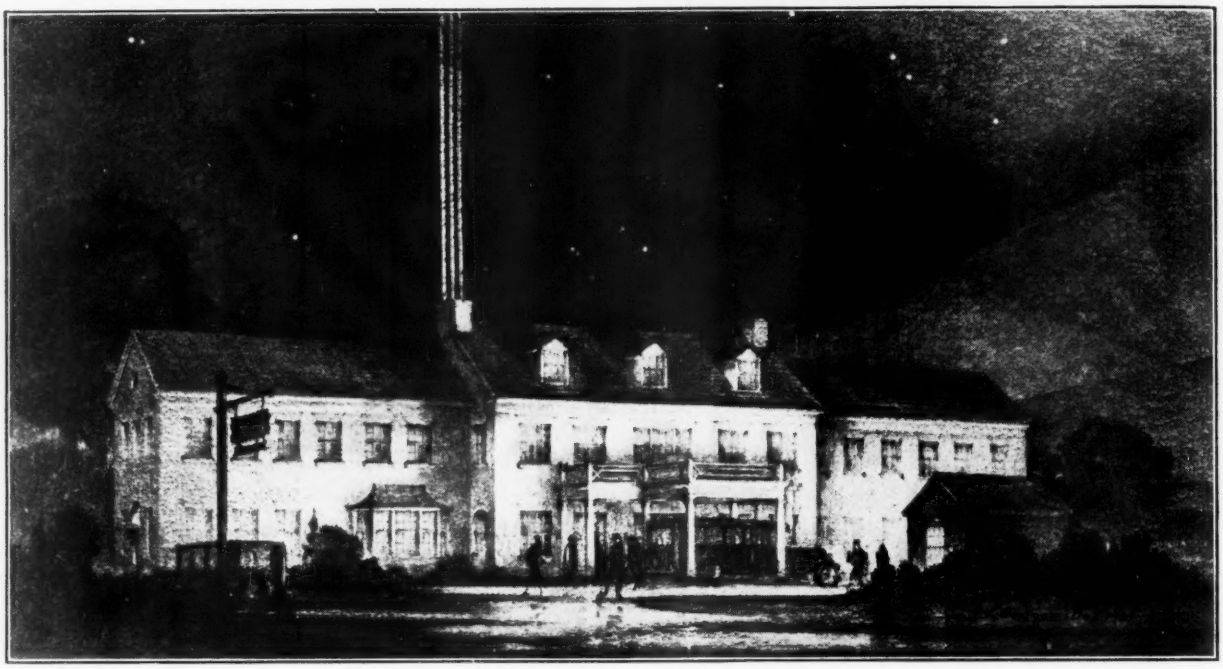


Architect's drawing of the tourist terminal and service station being built by the Pierce Petroleum Corp. at Columbia, Mo. in connection with which a 40 room hotel is to be built.

Pierce Undertakes New Experiment In Caring for Motor Tourists

By J. C. Chatfield
N. P. N. STAFF WRITER

A NEW experiment in caring for the needs of the touring motorist is to be undertaken by the Pierce Petroleum Corp. in connection with its magnificent tourist station at Rolla, Mo., and in connection with a new station which is being erected at Columbia, Mo. The new project is to be a 40-room hotel to be built adjacent to each of the two stations.

The need for a first class tourist hotel at Rolla was made evident last summer after Pierce opened its tourist station near that town. Hundreds of tourists stopping to use the fine rest rooms, buy gasoline and oils and eat in the Harvey house type restaurant, have asked whether rooms were available in the building.

In planning the two hotel projects, E. D. Levy, Pierce president, first sought to ascertain all of the needs of an automobile tourist. The present station at Rolla provides gasoline, oil and grease for the car, cold drinks or ice cream for those who may only be needing light refreshment, or full meals for those who are hungry, and clean rest rooms.

With the new hotels Mr. Levy plans to provide much more fully for the tourist's needs. Vacuum and tire service and shelter will be provided for the automobile in addition to present facilities. The tourist's car will be cleaned of dust at night as a part of the hotel service and complete servicing may be had during the night when ordered.

For the tourist himself a big convenience will be overnight laundry service, toilet articles, telephone and telegraph service, money for those with travelers checks and well furnished, restful rooms.

A modern laundry will be installed in the basement of the present service station and restaurant building at Rolla and the one being built at Columbia. This plant will handle the hotel and restaurant linens and in addition will be able to deliver freshly washed and ironed clothing in the morning to motorists stopping only for a single night.

Even in most of the city hotels a day is required for laundry and when washing accumulates the motorist must lay over for a day.

All hotels now discourage their guests doing any washing in their own rooms. But it is a fact that ladies always have a few garments which they will not trust to the laundry and hence wash in the bath room when on tour. The Rolla and Columbia hotels will encourage guests in doing light washing by providing facilities.

Behind a full length mirror door in every room will be a dressing room and beyond that the bath room. The clothes closet will open off of the dressing room. On the back of the clothes closet door will be a folding ironing board and in the closet will be found an electric iron. A cabinet in the closet will be equipped as an electric dryer in which small garments may be hung and dried quickly.

With this equipment the lady tourist may wash her fragile garments in the bath room and dry and iron them quickly without difficulty and without causing the bedroom to present an untidy appearance.

EACH of the hotels will be three stories high. The ground floor will be a garage for the storage of guests' cars. The second and third floors each will contain 20 guest rooms, a total of 40 for each hotel. On the third floor will be 10 rooms for chauffeurs only. Each hotel is planned to cost $150,000 exclusive of real estate and will be ready about June 1.

An interesting feature of the service

Your volume depends on your station salesmen.

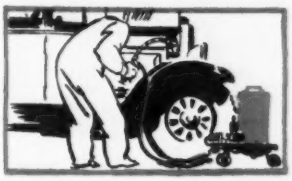
Are they helping to increase it in these ways?

Do they serve customers quickly and efficiently?

Do they sell each customer his maximum requirements?

Are they well-informed on road conditions, hotels and local points of interest to tourists?

Are they getting regular customers for your greasing and oil-changing business?



Do they give the courteous service that makes regular customers of women drivers?

MAKING salesmen of your attendants means more business and greater profits for you. What are *you* doing to help these assistants become first-class salesmen?

The Mobiloil Filling Station Specialist can give you some practical suggestions about increasing profits through better selling. He has worked with hundreds of operators on this and other problems in station management. Talk it over with him when he calls. His services are available to all *independent* dealers.

A free book for better business

Send for our little booklet "The Handbook for Filling Station Salesmen". You will find it full of interesting pointers for your attendants. A card to our nearest branch office will bring your copy.

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Look for the red Gargoyle trade-mark on the Mobiloil container

Let

'er rain, the more the merrier!

No matter how rough the weather, the Highland Cab is comfortable. They say it's got a special insulated roof—I don't know, but since the Boss's been buying this cab my head doesn't freeze in winter or roast in summer."

There's the Highland Cab for every make and model of truck, each fitted with the special Highland Rocker Sill Mounting at no additional cost to you. See the Highland Distributor near you, or write us for additional information.

The Highland Body Mfg. Company
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HIGHLAND
FOR CABS

Reinforced Folio

362—A very compact folio, having three pockets. Made from the best grade smooth black cowhide. Stiffened bottom reinforced with metal studs. Case contains six 4-oz. bottles and five grease jars. Two inner cases may be carried.

Less 10% for Cash
Other styles in our FREE Catalog

L-U-C-E

Builders of Sales Luggage
614 Delaware, KANSAS CITY, MO.

to be rendered tourists by Pierce in connection with the hotels is to be the method of reserving rooms. At certain Pierce stations the tourist will be able to buy his room for the night at Rolla or Columbia. He will receive a ticket, similar to a Pullman ticket, which will show the number of the room he is to occupy that night. On arrival the guest will not need to register but may be conducted to his room by the bell boy immediately.

All rooms in the hotel are to be furnished as well as those in any first class city hostelry. All bed-room furniture will be of steel. Each room will contain two full sized beds. Both furniture and woodwork will be finished in lacquer in Pierce standard colors.

The location of the Columbia hotel is half-way between Kansas City and St. Louis. At present the motorist in either city planning to drive across must take the best part of the day for the trip.

With the aid of the hotel he will be able to drive out 125 miles in the early evening, spend the night at a cool country hotel, and have only a relatively short drive into the city the next day which will not tire him out for the day's work. The hotel is on U. S. Highway 40 which carries heavy tourist traffic.

The Columbia hotel and station are being built just across from the airplane landing field there. The field is used by mail planes as well as other craft. This traffic is expected to develop business for the plant.

The location of the Rolla hotel is ideal for catching the eye of the tourist on Highway 66 to the Southwest. Every room in the structure will have an unobstructed view across the top of the Ozark mountains for miles. The site is a fair day's drive from Tulsa and is far enough from St. Louis to catch a great deal of holiday business from that city.

In previous issues of NATIONAL PETROLEUM NEWS the tourist station plans of the Pierce have been described in detail.* Ground was broken five miles east of Tulsa for a station on Jan. 31 and the Columbia, Mo., station was started Jan. 28. Work will begin on the Miami, Okla., station shortly. When these are complete the company will have a magnificent service station and restaurant every 125 miles between St. Louis and Tulsa and one half way between Kansas City and St. Louis.

The company has contracted with the Stark Bros. Nursery Co. to landscape all of the grounds surrounding the present and proposed tourist terminals. This work will go forward along with the building operations.

*NATIONAL PETROLEUM NEWS, Jan. 9, 1929, page 105. NATIONAL PETROLEUM NEWS, Aug. 1, 1928, page 20.

ON THE LAZY BENCH

National Petroleum News

Can You Beat It—

An excited man rushed out of a bank. "Bandits! A hold-up! Police!" he shouted, but not a single policeman was in sight. A pedestrian ran north to find a policeman. A messenger boy on a bicycle dashed south to find a policeman. A driver of a delivery truck sped east to find a policeman.

"Fools!" muttered a by-stander, "I'll get a half dozen policemen!" And he parked his car beside a fire hydrant.

As if by magic six policemen appeared. While he explained, the bandits got away.

—The Loreco Diamond

* * *

Safe

First Broker: What's companionate marriage?

Second Broker: Interim security no par, cumulative, free from stock liability, callable at any time.

—The Pure Oil News

* * *

Kind Hubby—Confound it, what on earth do you want a larger allowance for?

Pretty Wife—I'm saving up for our divorce, dear.

—Skelly News

* * *

"Dearie, how short should my skirt be?"

"Let your chassis be your guide."

—The Pure Oil News

* * *

Judge—"Isn't this the fifth time you have been arrested for drunkenness?"

Old Friend Sot—"Don' ash me. I thought you'sh keeping score."

—The Loreco Diamond

* * *

Teacher: What do elephants have that no other animals have?

Pupil: Little elephants.

—The Pure Oil News

* * *

Our Scotch One

A Scotch traveling salesman, held up in the Orkney Islands by a bad storm, telegraphed to his firm in

Aberdeen: "Marooned here by storm wire instructions."

The reply came: Start summer vacation as from yesterday.

—The Loreco Diamond

* * *

Slim Stance

"Now, Paul, tell me why we put a hyphen in bird-cage."

"It's for the bird to sit on."

—The Pure Oil News

* * *

"What's the date today?"

"I don't know."

"Why don't you look at the newspaper you have in your pocket?"

"No use. It's yesterday's paper."

—Skelly News

* * *

Diner: "Make that ham and eggs pork chops!"

Fresh Waitress: "The chef's too busy to do any tricks just now."

—Independent Topics

* * *

We just heard of a guy who got into trouble by being frank and earnest. He was Frank in St. Paul and Ernest in Minneapolis.

—The Pure Oil News

* * *

Him—"And why do you call me Pilgrim?"

Her—"Well, every time you call make a little progress."

—Skelly News

* * *

Nothing to Deposit

"Since I bought a car I don't have to walk to the bank to make my deposits."

"Ah, you ride there?"

"No, I don't make any."

—Independent Topics

* * *

"Is he a good driver?"

"Well, when the road turns the same time he does, it's just a coincidence."

—Skelly News

* * *

They were eating in a place where something else than tea was served in teacups.

"I've a darn good notion," said Wimps, "to buy this place."

"Wait till we've had a couple more," replied Rowley, "and I'll sell it to you."

—Independent Topics

* * *

A young lawyer, pleading his first case, had been retained by a farmer to prosecute a railway company for killing twenty-four hogs. He wanted to impress the jury with the magnitude of the injury.

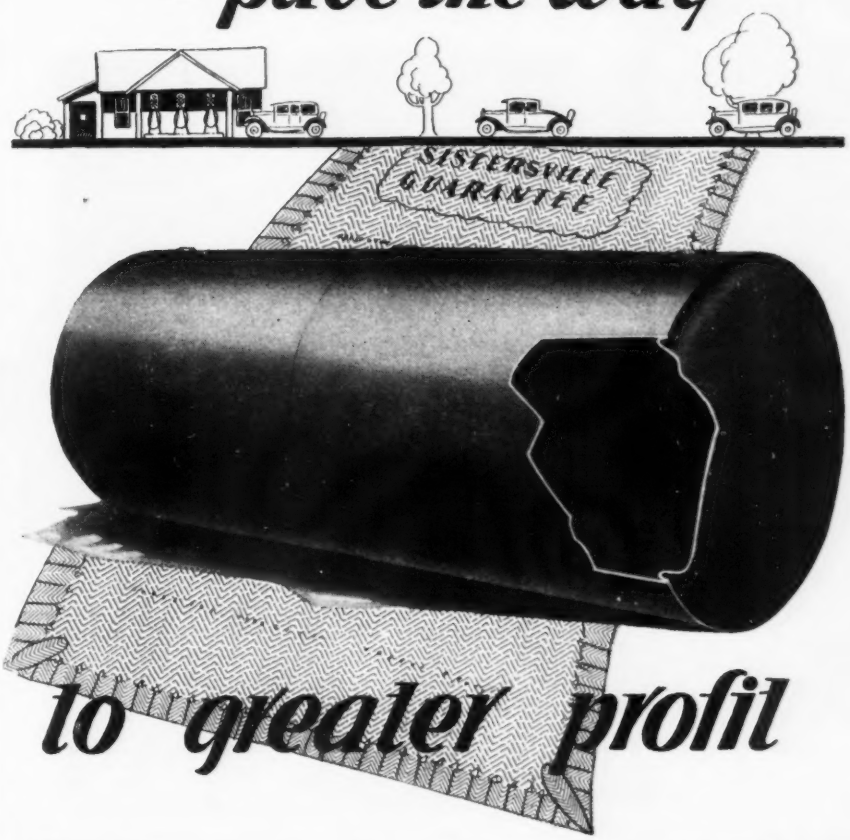
"Twenty-four hogs, gentlemen. Twenty-four twice the number there is in the jury box."

—The Booster

* * *

"Hey, Mike," said a workman to the other atop, "don't you come down on that ladder on the north corner; I took it away."

SISTERSVILLE TANKS
~pave the way



to greater profit

GREATER profits can be made by the oil marketer who uses Sistersville Tanks. They safeguard the precious liquid contents against leakage. *They are guaranteed tight.* Profits cannot dribble away through faulty materials and workmanship.

Sistersville also specializes in miscellaneous steel plate construction, including bins, hoppers and breechings.

Write for free catalog.

SISTERSVILLE TANKS

SISTERSVILLE TANK AND BOILER WORKS
SISTERSVILLE, W. VA.

BETHLEHEM
WAX PLANT EQUIPMENT

Filter Presses — *Wax Moulding Presses*
Wax Distillate Chilling Machines — *Scale Wax Cooling Drums*
Wax Testing Presses — *Paraffine Wax Sweater Plants*
Complete Wax Plants designed and built
Pumps, Stills, Towers, Condensers and other Oil Refinery Equipment
Oil Burning Systems — *Complete Power Plant Equipment*

BETHLEHEM STEEL COMPANY, *General Offices, Bethlehem, Pa.*

District Offices

New York Boston Philadelphia Baltimore Washington Atlanta Pittsburgh Buffalo Cleveland Detroit Cincinnati Chicago St. Louis San Francisco Los Angeles Seattle Portland

Four Faces Well Known

HARRY D. FREAUAUFF, in charge of refining and marketing in the Cities Service Co. came into the oil business from the public utility field, like a good many others in the Doherty companies.

Born in Pennsylvania, Mr. Freauauff early went west, spending much of his life in Denver and other cities in Colorado, holding down many jobs in the public utility branches of the Doherty interests. The south also saw considerable of him in his earlier years.

Now he is back in New York again.

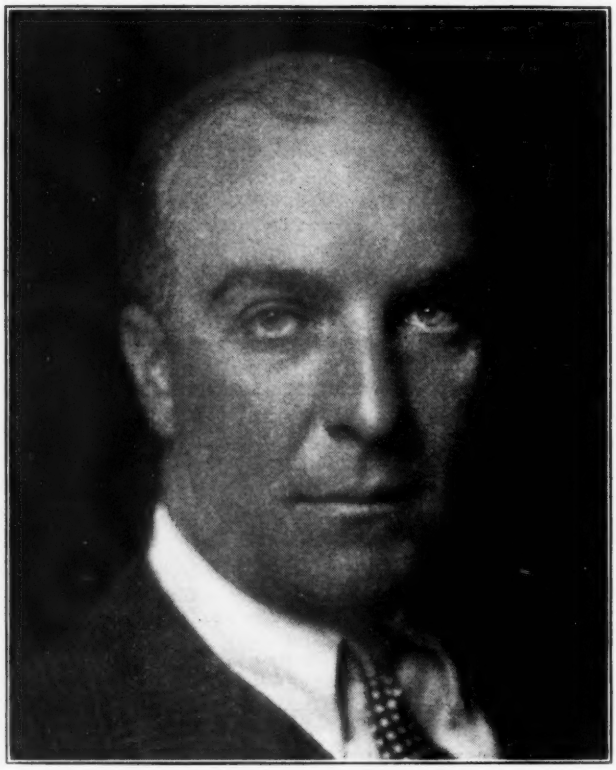
In 1918 he was called from the gas and electric end of the business into the oil end, being made assistant to J. C. McDowell, at that time head of the oil division of the Doherty interests. Later he became the active head of the refining and marketing ends.

THOMAS J. HILLIARD, president of the Waverly Oil Works Co. of Pittsburgh, Pa., is half way through his thirties and is running two refineries and a large market organization in the general Pittsburgh district.

He was graduated from Princeton just long enough before the war to get into the oil business as The Carhill Petroleum Co. of Pittsburgh, and Tulsa, a brokering company specializing in fuel oils. With our entry in the war he enlisted in the aviation division and did a lot of flying in this country but did not get across.

A few years back he got together some financial interests and took over the old Pittsburgh Oil Refining Co. and later bought the Waverly, putting that company's name on the consolidation.

Mr. Hilliard swings a wicked mid-iron and gets around the necessary 18 holes in the seventies —and easily.



In Oil Marketing Field

C. O. SCHOLDER, vice president in charge of sales of the Standard Oil Co. of Louisiana, began his career in the oil business as a salesman in 1892 with the Standard Oil Co. in Kentucky. His main business was selling kerosene and axle grease.

He rose by successive steps to be subagent at Chattanooga, Tenn., then special agent at Memphis in charge of the business in Mississippi, Alabama and Tennessee. In 1910 when the then newly formed Standard Oil Co. of Louisiana bought the business of the Standard of Kentucky in Tennessee, Mr. Scholder went along with it into the employ of the Louisiana company. In 1914 he was made a director of the Louisiana company still maintaining his headquarters in Memphis. In 1917 he was made general sales manager and moved to New Orleans. In 1920 he was made a vice president.

J. W. CARNES, vice president of the Sinclair Refining Co. is "Jack" Carnes of sample case days.

He used to hustle a case of oil bottles around the trade out in the West and put in a number of years with the Shell Petroleum Corp., then the Roxana. He went with Sinclair in the sales department shortly after it got started and got shoved along to the top of the marketing department as he overcame the company's sales difficulties. His task has been the whipping of a lot of unrelated sales organizations of the companies that originally formed the Sinclair organization, into shape, and developing a new organization, bulk and service stations.

He lives in New York but can be more easily found most anywhere else in the country, wherever there is a green and white Sinclair outlet.

Speedy and Thorough Car Greasing Promised While Owner Watches

By N. M. Mainpa
N. P. N. STAFF WRITER

THE STANDARD OIL CO. OF OHIO, in building a "lubritorium" at its new service station in Cleveland, is making a drive for chassis greasing business.

The company is bidding for the job of keeping Cleveland automobiles greased with the promise of speed and thoroughness to be accomplished with modern automatic equipment in the hands of trained experts.

The new station at the corner of Carnegie Avenue and East 89th Street, Cleveland, departs from the old type of Standard station. Not only is it distinguished by architectural beauty but it is designed to be a model of modern efficiency. It is the company's answer to the demand of the times—speed, efficiency and service.

Hand-operated equipment has been replaced by power-driven devices wherever possible.

The appeal to the woman driver has not been overlooked. A tastefully furnished rest room opposite the lubritorium permits her to sit and watch through the plate glass window every operation that her car undergoes. Or she can read a magazine or compile her shopping list. She may smoke if she likes.

Some 13,000 square feet of space are devoted solely to the servicing of the automobile at this new station. The lubritorium will offer complete greasing and oiling service for engine and chassis. It houses a central greasing system, hydraulic lifts, air lines, underground oil drainage, and vacuum steam heating system. There will be eight or ten men on the job all the time.

The meter type of gasoline dispensing equipment is used. There are tire inflating machines at advantageous points on the site, and showers and lockers for employes.

Neon signs, powerful flood-lights and specially designed roll-up doors are other features of the equipment.

If the day of hand-operated equipment at stations is drawing to an end, its death knell has been sounded at this Standard station. It is taboo here. Every device works through the central power system in the boiler and air compressor room. A mere lift of the hand or a turn of the wrist is all that is necessary to serve the customer quickly.

The station, when completed, is expected to be one of the largest, most complete and most modern in Ohio. It will cost well over $30,000.

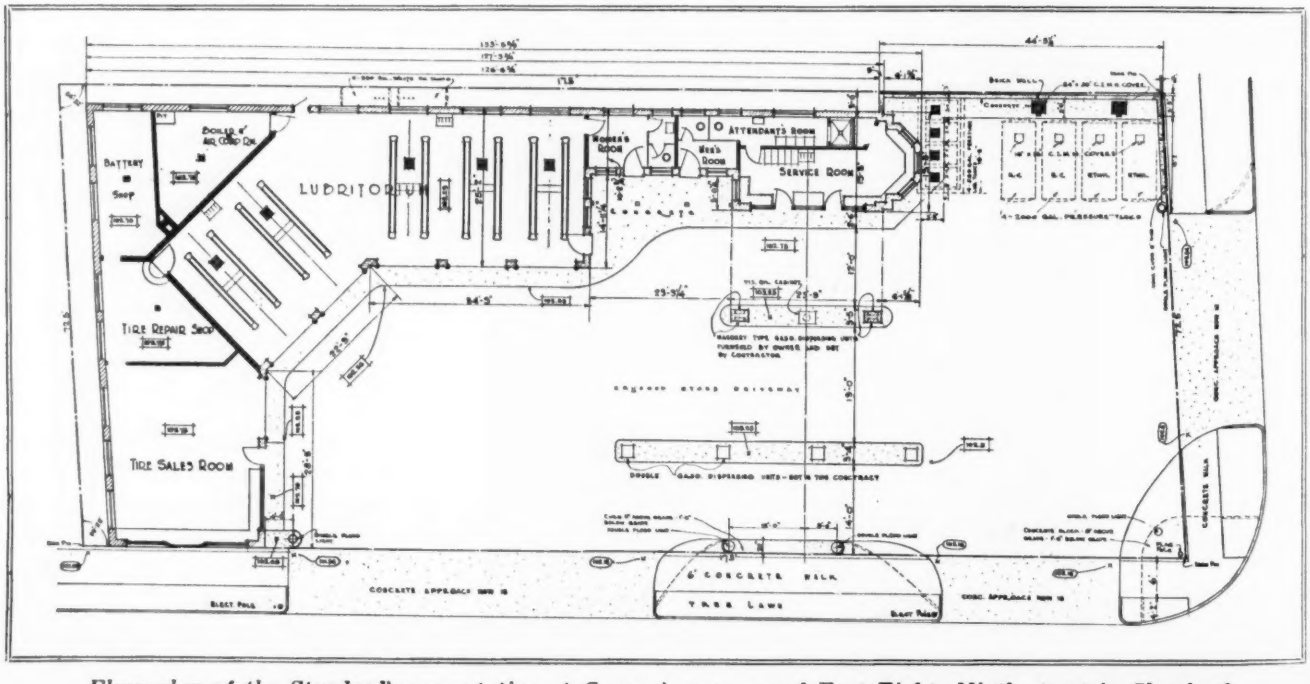
This new type of station is not an additional one for the company, however. It is replacing an old one on the same site, that location being one that has proven profitable.

"We are not building any additional stations," E. A. Wagoner, research engineer for the company, said. "We are merely improving the old ones on locations of proven gallonage in order to furnish more adequate facilities to motorists."

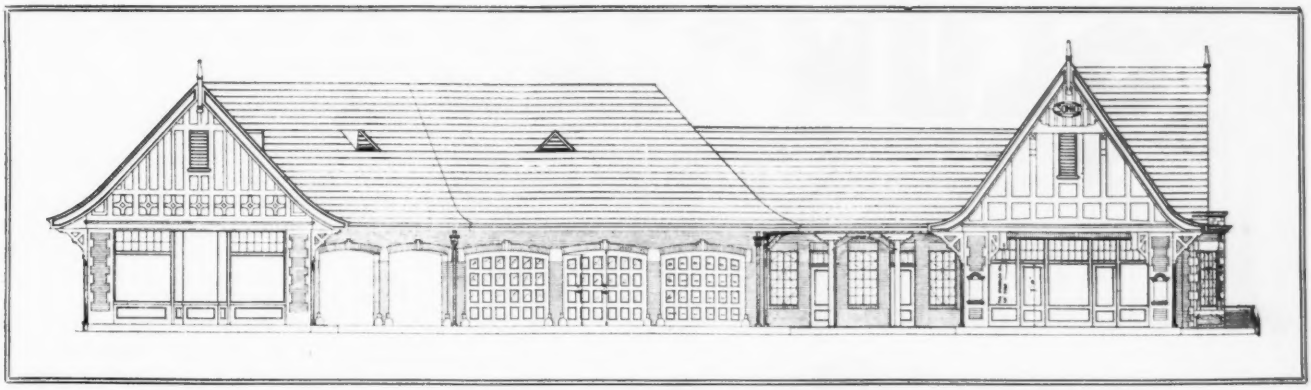
In the lubritorium are five hydraulic lifts, 14 high pressure grease guns, a central greasing system, two air compressors and oil lines leading in from oil storage underground. Air, steam, hot water and grease lines, and hose reels are installed above the ceiling out of sight. Grease is dispensed from these lines through the pistol type of booster gun. A runway for the prompt servicing of these lines, has been erected.

AIR service lines extend to both sides of each auto lift. No spots on floors nor walls will mar the aesthetic taste of fastidious customers, as crankcases drain into two pressure tanks underground which later empty by air pressure into a truck.

Flood-lights, placed at floor level



Floor plan of the Standard's new station at Carnegie avenue and East Eighty-Ninth street in Cleveland



New English Tudor type service station of the Standard Oil Co. of Ohio, Cleveland, which features a "Lubritorium" for greasing and oiling service

in the lubritorium, are trained on the automobile chassis to insure efficient lubricating service at night.

The lubritorium covers 1,425 square feet. Eight or ten men will be employed to operate it.

Other features on the site will be rest rooms completely furnished for men and women, tire sales room, tire repair shop and battery room. These latter will be leased out to individuals and not operated by the Standard itself. Brake testing will be among the services offered in one of these shops.

Concrete vaults underground hold four 250-gallon tanks of oil. From there the oil will be dispensed to two points in the lubritorium, to one point in the service station room, and it will also reach two outside oil cabinets in the porte cochere, or overhang, which takes the place of the canopy.

Sure to please the ladies is the full-length mirror in the rest room. An atmosphere of rest and ease is created by easy chairs, settees, rugs and other furnishings. Iceless cold water will be on tap.

A roof, extending nine feet over an open porch, 9 by 23 feet, extends in front of the rest room. This porch will be equipped with chairs in the summer.

The men's room, while not as elaborate as the ladies', will be equipped with all conveniences.

Lockers and showers for attendants are off the main service room, adjoining the rest rooms. "Showers for employes," Mr. Wagoner explained, "are, we believe, something new in service stations. Because we will employ only the highest type of man available for this kind of work, his convenience is being considered. We believe he will be the type to want to clean up before he goes home, and we are providing him with facilities to do so."

All gasoline dispensing equipment will be invisible in the meter system. There will be four meter cabinets and four double meter units, making it possible to serve 12 cars simultaneously. Four 2,000-gallon tanks comprise the gasoline storage.

Drives, leading into the station, have been made as spacious as possible. The two entrances on Carnegie avenue are 28 feet and 58 feet, and the one on East 89th street, 32 feet. Approaches are concrete, but the driveways on the station lot are of crushed stone.

The station building is L-shaped. It is an adaptation of the English Tudor type of architecture and is of variegated red brick with blue-gray asbestos roof. It has three gable ends, two on the Carnegie avenue side and one on 89th street. The gables are in stucco finish with wood trim. There are three louvres in each gable and three on the roof proper, for the ventilation of attic space. The roof contains 7500 square feet.

Interior walls of the building are of enamel tile and the floor is of red quarry tile. There are 4,250 square feet of floor space.

There are specially designed doors for the lubritorium which roll up, and are counterweighted to stop at any height. Steel casement sash is used throughout.

Neon signs and plenty of illumination will make it difficult for the motorist to overlook this station. Seven flood-lights, of 1,000 watts each, will be placed about the site at regular intervals. There will be 70 concealed lights around the eaves of the lubritorium.

Three Neon signs help to tell the world it's a Standard Oil station. Near the curb in front of the station supported on an ornamental metal pole, will be the largest sign. It will be 6 by 10 feet, and will be lettered in the company tradename "Sohio," in 24-inch lettering. Another one, letters in old English type, the name of the company. That is on the overhang. The third sign, in the gable end in the overhang, will also bear the trade-name "Sohio."

Keep Everlastingly After Station Attendants

Reprinted from *Equipage*, published by Merit Equipment Corp.

WHEN one thinks of a merchandising campaign, he thinks in terms of advertising, of house policy, of quality of product, but all too often the most important link in the chain of marketing is ignored—the man behind the grease gun.

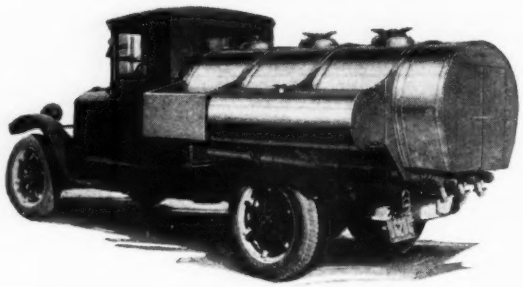
We lead our public to the station because of the prestige of the oil and gasoline or by virtue of the station's attractive appearance, or by billboards, newspaper space, direct mail, etc. What happens then? A laggard attendant, indifferent in his attitude or not knowing how to please, disrupts all of the good will. And repeat sales fail to repeat.

Without question, the attendant, if he is to be considered as a clerk or a salesman, has a far more difficult selling job to perform than the man or woman behind the counter. The public holds a rather lofty attitude toward the attendant, expecting him to perform as a public servant, yet it is human nature to want to be "sold." The attendant can neither be too dumb nor a smart Aleck. He cannot simply follow orders nor be too solicitous in his selling method. If ever a man must use good judgment and study human nature, that man is the filling station attendant.

Every oil company should have a sales manual for its attendants. If the sales manual presents any difficulty, the company should at least issue monthly bulletins to its men, or

COLUMBIAN TRUCK TANKS

Are furnished in all sizes and equipped to fit every kind of service



From the smaller speed truck models like the Utility Speed job shown above

Thru the medium and larger sizes for various chassis and types of service

To the mammoth trailer and semi-trailer units for handling the very largest loads.

Write for Circular 202 giving complete information and description of exclusive Columbian features which have made this line famous—the superior material and welding and everything that goes to make Columbian Tanks preferred by thousands of Oil Companies. Ask for prices, plans and full details, mentioning sizes and type of service intended.

COLUMBIAN STEEL TANK COMPANY

EST'D 1894

TANKS FOR THE WORLD

1405-1625 WEST 12TH STREET KANSAS CITY, MISSOURI

better still, the sales manual together with the monthly bulletins should be used.

Every few weeks it is well to hold classes in salesmanship for the station attendants. New men are always coming into the organization; others are passing out. The efforts of the attendants must be co-ordinated toward greater sales production, and they can be told as a group what is expected of them and how they can accomplish the purpose.

Each man should know all there is to know about the product—how it is made—why it is superior in quality—how to meet objections, and how to interest the gasoline buyer in the company's oil, and vice versa.

At these meetings the advertising manager should acquaint the attendants with the advertising campaign, exhibit the ads that are to be run, explain what they mean and how the attendants can capitalize on the advertising and how the advertising can benefit from the men.

Let them ask questions. Sometimes these questions will sound nonsensical or unnecessary, but many times they will result in clarifying questions in the minds of the more retiring men who hesitate about confessing their ignorance.

We know of one oil company who holds their meetings at one of their stations when weather permits. Here under practical conditions the sales manager and one of his supervisors play the part of the customer and attendant respectively. Each type of customer is impersonated and the methods of best pleasing the customer are demonstrated. A car is driven over the pit and the attendant explains to his imaginary customer what he is doing and why he is doing the work.

Attendants should be urged to remember the names of customers rather than salute them with the oft-quoted salutation of "What will it be Doc.?"—or calling a customer "Buddy," "Brother," and other fraternal names, offensive to many people.

Attendants should be instructed on how to sell to women drivers—how courtesy should be extended without overdoing the Sir Walter Raleigh act—to always drive the car on the rack or over the pit for the woman—to utilize a clean pair of white cotton gloves when handing change back to the woman, and other acts of courtesy and special attention.

Show your attendants how they can best utilize their equipment to expedite sales. Modern station equipment is not only intended as a means for storing and dispensing petroleum products, but for exhibiting to the customer the fact that the company is considerate of the motorists' problems, chief among which is the matter of speedy service. Often a station attendant carrying a grease outfit, approaching the driver, gives the impression that "he is on the job"

and ready for service, in contrast to the man who saunters up to the car owner and simply asks whether he would like to have his car lubricated.

Keep everlastingly after your attendants, recognizing them as your sales staff and not as manikins—and watch your sales curve go upward.

Iowa Jobbers to Talk Marketing Code

DES MOINES, Ia., Feb. 7.—Speakers and their subjects for the two-day convention of the Iowa Independent Oil Men's Association, which will be held on Feb. 19 and 20 at the Fort Des Moines Hotel here, will be:

Paul E. Hadlick, secretary, Minnesota Petroleum Association, "The Code of Ethics, Interstate as Well as National."

Warren C. Platt, editor, NATIONAL PETROLEUM NEWS, "Marketing Practices to Better the Oil Industry."

C. C. Wagner, Dacotah Oil Co., Madison, S. D., "Twentieth Century Chemistry and Industry."

Homer Coppack, Farmers Oil Co., Shenandoah, Ia., "The Small Jobber's Problems."

J. M. Cushman, president of the association, will preside. An open forum discussion will be a feature of the meeting and the opening of the question box which will be followed by a general discussion by all jobbers.

A banquet and dance will be held the evening of the first day, and a special luncheon and theater party has been arranged for ladies.

Ethics Code Approved In Principle

FARGO, N. D., Feb. 8.—The North Dakota Petroleum Association which held its annual Convention at the Elk's Club, Fargo, N. D., January 31 and February 1, 1929, adopted a resolution approving in principle the "Code of Marketing Practices for Refined Petroleum Products," which Code was adopted by the American Petroleum Institute at its last Convention, and authorized its Secretary, Paul E. Hadlick, to represent the Association at the hearing on the Code before the Federal Trade Commission February 11th.

Officers were re-elected, including H. M. Wilson, President; K. H. Helgerud, Vice-President; H. A. Schmitt, Treasurer; Paul E. Hadlick, Secretary; and T. L. Berry, a Director.

About 125 jobbers were in attendance, the largest meeting ever held. Interest centered around the proposed increase in the North Dakota gasoline tax, and the form of bill most acceptable to the oil companies.

Alert

LORECO *Master* MOTOR FUEL

FIRING instantly at the first touch of the starter, even in a cold motor, Loreco Master Motor Fuel meets every requirement for a premium trade. Highest anti-knock value. Low Initial for quick starting, efficient in power and mileage; it means new and enthusiastic customers for you.

Write or wire for quotations. A limited supply from a dependable source available now.

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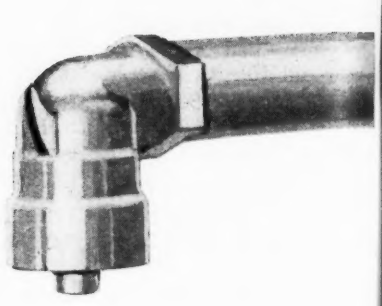

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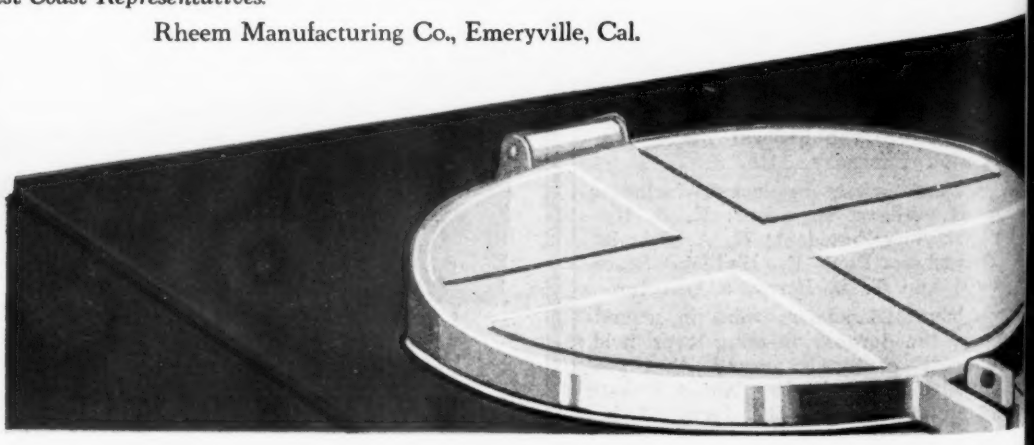

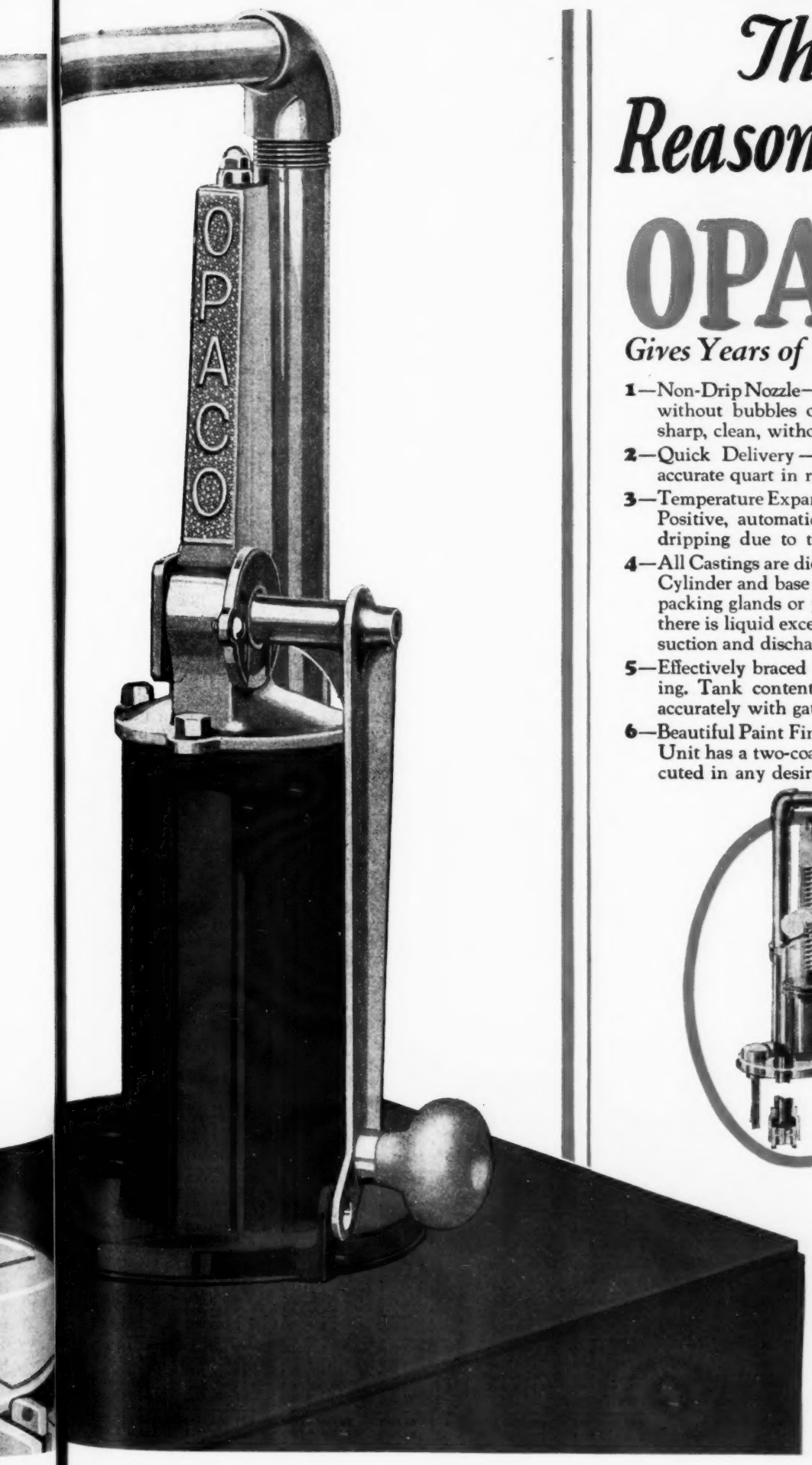

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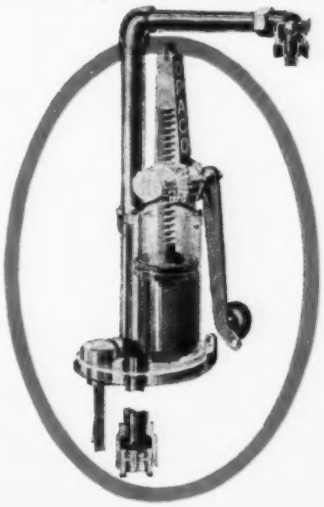

1928 Stocks of Crude and Refined Oils Rise 25,000,000 Barrels

By Roger B. Stafford
N. P. N. STAFF WRITER

ABOVE ground stocks of petroleum increased 24,932,000 barrels in 1928, the Bureau of Mines reports. The gain in crude oil stocks was 19,558,000 barrels; in refined oils 5,500,000 barrels. Natural gasoline stocks fell 126,000 barrels. Gasoline stocks were 250,000 barrels less at the end of the year than at the beginning.

The new supply of petroleum in 1928 was 1,036,934,000 barrels, a gain of 22,850,000 barrels over the new supply in 1927. Domestic production of crude oil reached 900,364,000 barrels last year, the second largest volume of production in the history of our industry. It almost tied with the record production of 1927 which was 901,129,000 barrels, or 765,000 barrels more. Daily average crude production in 1928—366 days—was 2,460,011 barrels as compared with 2,468,846 barrels in 1927, a 365-day year.

Imports of crude oil rose 21,200,000 barrels to 79,583,000 barrels, the largest volume of imports since the Mexican fields were at their prime six years before. Venezuelan crude rose to first place in our imports with receipts from that country totaling 46,976,000 barrels. Mexico was second with 17,279,000 barrels, a fall from 26,019,000 barrels in 1927. Receipts of Colombian crude rose to 11,838,000 barrels from 7,962,000 barrels in 1927.

Exports of crude oil rose 3,121,000 barrels to 18,964,000 barrels with Canada taking most of our shipments abroad.

Although the accumulation in stocks of all oils in 1928 was approximately 25,000,000 barrels, the stocks at the end of the year represented 222.2 days' supply at the 1928 rate of foreign and domestic demand, or 5.3 days' supply less than the stocks at the end of 1927 represented at the 1927 rate of demand. The excess of new supply of all oils over the 1928 demand averaged 68,000 barrels a day. In 1927 the excess was 187,000 barrels a day.

The better statistical showing in 1928 was probably entirely artificial due to the proration restrictions in the new southwestern producing pools. Had not proration been enforced, particularly in west Texas, it is likely that the excess of supply over demand would have been a great deal larger than in 1927 and the accumulation in above ground stocks of all oils may have been several times the 1928 rise in stocks.

The stocks of Dec. 31, 1928, formed 222.2 days' supply at the 1928 rate of demand but only 220 days' supply at the December rate. The Dec. 31, 1927, stocks formed 227.5 days' supply at the 1927 rate of demand but only 221.7 days' supply at the December, 1927, rate of demand.

Domestic gasoline production reached 377,183,000 barrels, a gain of 46,748,000 barrels over 1927 production. Imports were slightly lower. Domestic demand, as represented by shipments from refineries, increased 31,125,000 barrels to 327,932,000 barrels. Exports increased 9,460,000 barrels to 53,797,000 barrels. Total gasoline demand exceeded new supply by 250,000 barrels.

Kerosene stocks increased 1,386,000 barrels in 1928; gas and fuel oils including heavy California crude oil 7,160,000 barrels, and lubricating oils 480,000 barrels. Stocks of paraffin

Crude Stocks as Month Ends

(Thousands of Barrels)

1927	East of Calif.	†In Calif.	Total U. S.
January	278,972	118,988	397,673
February	285,458	117,410	402,868
March	290,110	117,454	407,564
April	297,895	117,843	415,738
May	307,016	117,432	424,448
June	315,702	117,414	433,116
July	324,930	116,996	441,926
August	333,673	115,227	448,900
September	339,741	114,981	454,722
October	345,357	113,467	458,824
November	348,885	113,746	462,631
December	351,646	111,855	463,501
1928			
January	358,892	114,820	473,712
February	362,963	114,907	477,870
March	368,744	114,117	482,861
April	371,579	113,053	484,632
May	371,551	113,111	484,662
June	370,751	113,431	484,182
July	369,243	113,878	483,121
August	368,653	113,367	482,020
September	366,652	113,433	480,085
October	368,031	113,767	481,798
November	*367,619	115,053	482,672
December	368,431	116,970	485,401

†Includes heavy fuels.
*Revised.

Petroleum Supply and Demand — Barrels

	Dec. 1928	*Nov. 1928	Oct. 1928	Dec. 1927	Jan.-Dec. 1928	Jan.-Dec. 1927
Domestic crude production: Light	71,231,000	67,999,000	71,876,000	66,427,000	806,534,000	788,794,000
Heavy	8,217,000	8,032,000	7,786,000	8,524,000	93,830,000	112,335,000
Imports of crude oil	6,807,000	6,908,000	6,703,000	6,210,000	79,583,000	58,383,000
Imports of refined oil	1,097,000	728,000	771,000	756,000	11,891,000	13,353,000
Natural gasoline produced	3,929,000	3,768,000	3,695,000	3,433,000	42,286,000	38,657,000
Benzol used in blending	253,000	241,000	245,000	212,000	2,810,000	2,562,000
Total dew supply of all oils	91,534,000	87,677,000	91,076,000	85,562,000	1,036,934,000	1,014,084,000
Total stocks end of preceding month	609,581,000	607,369,000	607,143,000	586,480,000	589,607,000	521,136,000
Total supply of all oils	701,115,000	695,046,000	698,249,000	672,042,000	1,626,541,000	1,535,220,000
Exports of crude oil	1,529,000	1,691,000	2,016,000	1,717,000	18,973,000	15,844,000
Exports of refined oil	9,483,000	11,298,000	10,270,000	9,366,000	136,489,000	125,191,000
Domestic demand, crude and refined	75,564,000	72,476,000	78,564,000	71,352,000	856,540,000	804,578,000
Total demand	86,576,000	85,465,000	90,850,000	82,435,000	1,012,002,000	945,613,000
Total stocks of all oils end of month	614,539,000	609,581,000	607,369,000	589,607,000	614,539,000	589,607,000
Days' supply	220.0	213.9	207.2	221.7	222.2	227.5
Increase in stocks of all oils	4,958,000	2,182,000	226,000	3,834,000	4,958,000	2,182,000
Daily average new supply	2,953,000	2,923,000	2,938,000	2,760,000	2,833,000	2,778,000
Daily average demand	2,793,000	2,849,000	2,931,000	2,659,000	2,765,000	2,591,000
Daily average excess of supply	160,000	74,000	7,000	101,000	68,000	187,000
Crude stocks east of Calif: Light	320,015,000	319,196,000	319,279,000	303,539,000	320,015,000	303,539,000
Heavy	48,416,000	48,423,000	48,752,000	48,499,000	48,416,000	48,499,000
In California: Light	16,995,000	16,524,000	16,670,000	20,086,000	16,995,000	20,086,000
Heavy	99,975,000	98,529,000	97,097,000	93,719,000	99,975,000	93,719,000
Total stocks of crude	485,401,000	482,672,000	481,798,000	465,843,000	485,401,000	465,843,000
Total stocks of refined	128,530,000	126,505,000	125,199,000	123,030,000	128,530,000	123,030,000
Total stocks of natural gasoline	608,000	404,000	402,000	734,000	608,000	734,000

*Revised.

wax were lowered 40,294,000 pounds, according to revised stock figures of the bureau.

Crude Oil

Production of crude oil in December averaged 2,562,900 barrels a day. This figure compared with 2,534,400 barrels a day in November and 2,569,000 barrels in October, the record average. In December, 1927, the average production was 2,390,600 barrels. These figures are net.

Relatively small gains were made in production in Oklahoma and Texas but in California the daily average rose 32,400 barrels to 696,000 barrels. Production in Kansas fell 9200 barrels daily average to 96,100 barrels daily. Wyoming recovery fell 5000 barrels daily average. Elsewhere there was little change from November production figures.

Stocks of crude oil rose 2,729,000 barrels in December to 485,401,000 barrels. The only draft on crude oil stocks was one of 7000 barrels on heavy grades east of California. Light grades of crude east of California increased 819,000 barrels. In California stocks of light refinable crude oil increased 471,000 barrels and of heavy fuel grades 1,446,000 barrels.

There was a small decrease in stocks carried at refineries east of California but pipe line and tank farm stocks rose 1,033,000 barrels, most of the gain coming as usual in the Mid-Continent.

Tank farm and pipe line stocks east of California were 15,000,000 barrels larger Dec. 31, 1928, than at the end of 1927. Stocks in Mid-Continent tank farms and pipe lines were more than 18,000,000 barrels larger but Rocky Mountain and eastern field stocks were smaller Dec. 31, 1928, than a year before. The gain in stocks east of California was oil of 24 degrees A.P.I. gravity or lighter as stocks of crude heavier than 24 degrees decreased 83,000 barrels.

Stocks of the lighter grades Dec. 31, 1928, amounted to 320,015,000 barrels east of California and 16,995,000 barrels in California, making a total supply of 337,010,000 barrels of refinable crude. Stocks of heavy fuel grade crudes amounted to 148,391,000 barrels. At the end of 1927, the supply of refinable crude oil was 323,625,000 barrels and of heavy grades 142,218,000 barrels. Much of the heavy crude oil is suitable as a charging stock to cracking stills, and therefore is a potential source of gasoline.

Production in the Mid-Continent in 1928 increased 5,993,000 barrels or 1.1 per cent over 1927 production. California recovery was 786,000 barrels or 0.34 per cent more. Appalachian production was 514,000 barrels or 1.69 per cent more. Gulf Coastal production was 6,890,000 bar-

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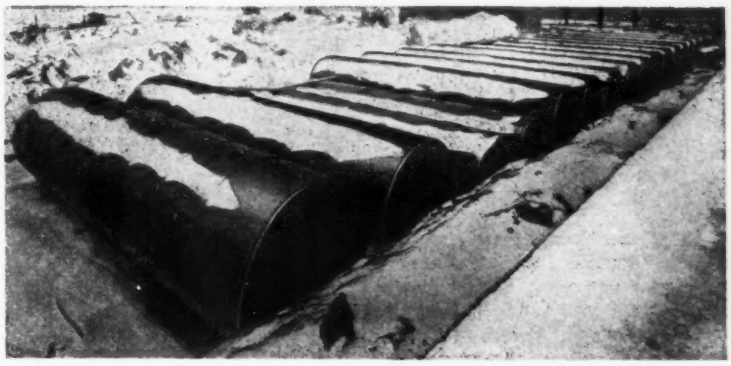

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Daily Average Runs to Stills — All Oils — Barrels

	East Coast	Appala.	Ind.-Ill.	Okla.-Kans.	Texas	La.-Ark.	Rocky-Mt.	Calif.	Total U. S.	
January, 1927	408,355	82,581	206,226	278,258	517,160	228,516	103,161	616,516	2,440,774	January, 1927
February	412,714	86,928	197,785	295,964	504,642	228,107	103,321	633,108	2,462,571	February
March	439,387	83,097	209,161	283,548	479,806	224,903	103,290	597,839	2,421,032	March
April	411,367	84,400	204,067	286,067	491,567	224,400	100,500	615,333	2,417,701	April
May	413,516	82,000	226,677	293,581	494,806	212,129	75,839	618,452	2,417,000	May
June	429,967	85,400	238,067	301,733	490,633	199,933	87,300	605,733	2,438,766	June
July	439,871	80,935	250,387	317,129	482,839	199,194	87,226	633,032	2,490,613	July
August	465,839	86,065	237,194	319,516	481,032	202,226	76,032	618,516	2,486,420	August
September	453,000	87,100	225,667	327,300	483,900	211,600	71,700	637,467	2,497,733	September
October	475,580	91,161	229,677	307,774	513,419	204,968	80,871	617,937	2,521,387	October
November	471,667	84,200	246,100	298,667	515,533	197,900	89,800	619,733	2,523,600	November
December	467,226	83,484	250,516	292,355	494,806	199,226	87,354	592,710	2,467,677	December
January, 1928	450,064	84,613	247,097	288,645	482,613	202,064	85,935	570,161	2,411,193	January, 1928
February	461,448	86,680	250,793	296,482	510,586	201,518	83,207	587,690	2,478,413	February
March	455,807	88,548	268,000	304,032	523,548	203,839	89,064	593,968	2,526,806	March
April	499,866	92,933	272,900	319,200	533,967	218,233	93,433	599,300	2,629,833	April
May	502,613	98,322	296,290	331,903	540,613	237,290	101,774	584,032	2,692,839	May
June	534,467	101,233	310,767	330,666	532,233	216,900	96,867	625,833	2,748,967	June
July	528,774	102,065	313,742	338,646	567,967	212,258	97,935	639,484	2,800,871	July
August	525,355	103,645	323,161	357,968	589,710	221,774	102,000	634,613	2,858,226	August
September	532,000	108,200	329,967	361,233	569,200	246,000	102,067	640,900	2,889,933	September
October	503,258	102,193	315,935	346,419	573,258	243,968	101,032	638,710	2,824,773	October
November	497,833	101,600	322,000	328,400	597,367	237,600	95,167	646,233	*2,825,800	November
December	501,097	100,548	310,032	328,935	563,064	237,097	91,032	677,806	2,809,611	December

*Revised.

rels or 13.23 per cent less. Rocky Mountain production was 1,408,000 barrels or 4.63 per cent less. There was an increase of 156,000 barrels or 35.53 per cent in production in Michigan. Lima-Indiana field production fell 8.61 per cent and Illinois-southwest Indiana production 3.86 per cent. Production in the entire United States was down 0.08 per cent.

Shipments of California crude to eastern United States refineries totaled 20,757,000 barrels in 1928 as compared with 23,328,000 barrels in 1927. There was no movement of California crude east in December, this being the second month of 1928 in which there was no intercoastal shipment.

Daily average production from the leading pools in December as compared with November average production follows:

	December	November
Seminole	271,000	297,000
St. Louis-Pearson	133,000	131,000
West Texas	348,000	341,000
Long Beach	187,000	196,000
Santa Fe Springs	97,000	55,000

Average initial production of new wells in December in these pools were: Seminole 800 barrels; St. Louis-Pearson 800; West Texas 5400; Long Beach 800, and Santa Fe Springs 4000. Twenty-nine wells were completed in December in the Seminole district; 51 in St. Louis-Pearson; 60 in west Texas; 15 at Long Beach, and 28 at Santa Fe Springs.

A total of 12,540 producing oil wells were completed last year in the United States as compared with 14,442 wells in 1927.

Runs to Stills

December runs of all oils to stills was 2,809,611 barrels, the smallest volume since last July. The runs were 16,189 barrels daily average less than November runs. The only large increase in charges to stills was in California where the average throughput was stepped up 31,573 barrels to 677,806 barrels daily. East Coast plants increased average runs 3264 barrels daily average to 501,097 barrels.

Of the total 87,098,000 barrels of all oils charged to stills, 72,899,000 barrels was domestic crude oil; 6,621,000 barrels of foreign crude; 4,181,000 barrels of rerun oils, and 3,397,000 barrels of natural gasoline. Loss amounted to 2,275,000 barrels or 2.8 per cent of the crude oil charged to stills.

Gasoline

With the curtailment of crude oil runs to stills in December, gasoline output was reduced 13,494 barrels daily average or 1.22 per cent. Output was larger than November output in only the California and Louisiana-Arkansas districts.

Of the total of 33,907,000 barrels produced, 19,553,000 barrels or 58 per cent was straight run; 10,957,000 barrels cracked, and 3,397,000 barrels

Stocks of Crude Oil

Domestic Unless Otherwise Specified Amounts in Thousands of Barrels

AT REFINERIES

	Dec., 1928	*Nov., 1928	Dec., 1927
East Coast: Domestic	8,496	8,243	8,690
Foreign	4,306	3,773	2,768
Appalachian	2,183	2,235	1,871
Indiana, Illinois, etc.	2,939	2,982	2,777
Oklahoma, Kansas, etc.	5,530	5,849	4,871
Texas Inland	2,184	1,885	1,432
Texas Gulf Coast:			
Domestic	7,206	7,399	7,686
Foreign	207	179	219
Ark. and inland La.	758	1,098	408
Louisiana Gulf Coast:			
Domestic	3,315	3,954	6,149
Foreign	1,359	1,153	1,046
Rocky Mountain	2,046	2,017	1,400
U. S. east of Calif.	40,529	40,767	39,317

AT TANK FARMS IN PIPE LINES AND ELSEWHERE THAN REFINERIES

Appalachian	4,738	5,027	6,294
Kentucky	764	810	1,040
Lima-Indiana	1,162	1,214	1,134
Ill., S. W. Indiana	11,367	11,260	12,170
Okla., Kans., Tex. except coastal	239,527	238,673	221,466
N. La.-Ark.	26,280	25,506	25,373
Gulf Coast	18,304	18,402	17,922
Rocky Mountain	25,501	25,718	27,238
East of Calif. pipe line, tank farm stocks	327,643	326,610	312,637
Foreign Crude:			
Atlantic ports	49	67	46
Gulf ports	210	175	38
Total refinery, pipe line and tank farm stocks east of Calif	368,431	367,619	352,038
California:			
20° and lighter	16,995	16,523	20,086
Heavier than 20°	99,975	98,529	93,719
Grand total	485,401	482,672	465,843

CLASSIFICATION BY GRAVITY

Elsewhere than at refineries east of California			
24° and lighter	320,015	319,196	303,539
Heavier than 24°	48,416	48,423	48,499

*Revised.

Crude Production—Barrels

	Dec., 1928	*Nov., 1928	Dec., 1927
Arkansas	82,600	82,500	90,600
California	696,000	663,600	610,900
Colorado	6,700	7,200	7,000
Illinois	16,600	16,900	17,100
Indiana	3,100	3,100	2,400
Kansas	96,100	94,200	105,300
Kentucky	19,200	20,300	17,900
Louisiana: Inland	35,400	36,600	45,500
Gulf Coast	19,300	18,600	10,000
Michigan	2,300	2,900	1,100
Montana	11,200	10,100	11,100
New Mexico	3,400	3,000	2,600
New York	8,100	8,200	6,100
Ohio	17,300	17,700	18,200
Oklahoma	734,600	733,100	719,600
Pennsylvania	27,300	27,500	25,200
Tennessee	.....	100	100
Texas: Inland	607,400	604,900	506,800
Gulf Coast	109,400	107,300	119,200
West Virginia	14,200	14,900	15,100
Wyoming	52,700	57,700	58,800
Total U. S.	2,562,900	2,530,400	2,390,600

*Revised.

Crude Oil Production by Fields — Barrels

FIELDS	Dec. Daily Avg.	Nov. Daily Avg.	1928 Total	1927 Total	Changes 1928 from 1927
Appalachian	82,300	85,000	30,968,000	30,454,000	+1.69
Lima-Indiana	4,000	3,900	1,677,000	1,835,000	—8.61
Michigan	2,300	2,900	595,000	439,000	+35.53
Ill.-S. W. Indiana	19,500	19,800	7,422,000	7,720,000	—3.86
Mid-Continent	1,556,100	1,555,300	552,980,000	546,987,000	+1.10
Gulf Coast	128,700	125,900	45,179,000	52,069,000	—13.23
Rocky Mountain	74,000	78,000	29,021,000	30,429,000	—4.63
California	696,000	663,600	231,982,000	231,196,000	+0.34
U. S. Total	2,562,900	2,534,400	900,364,000	901,129,000	—0.08

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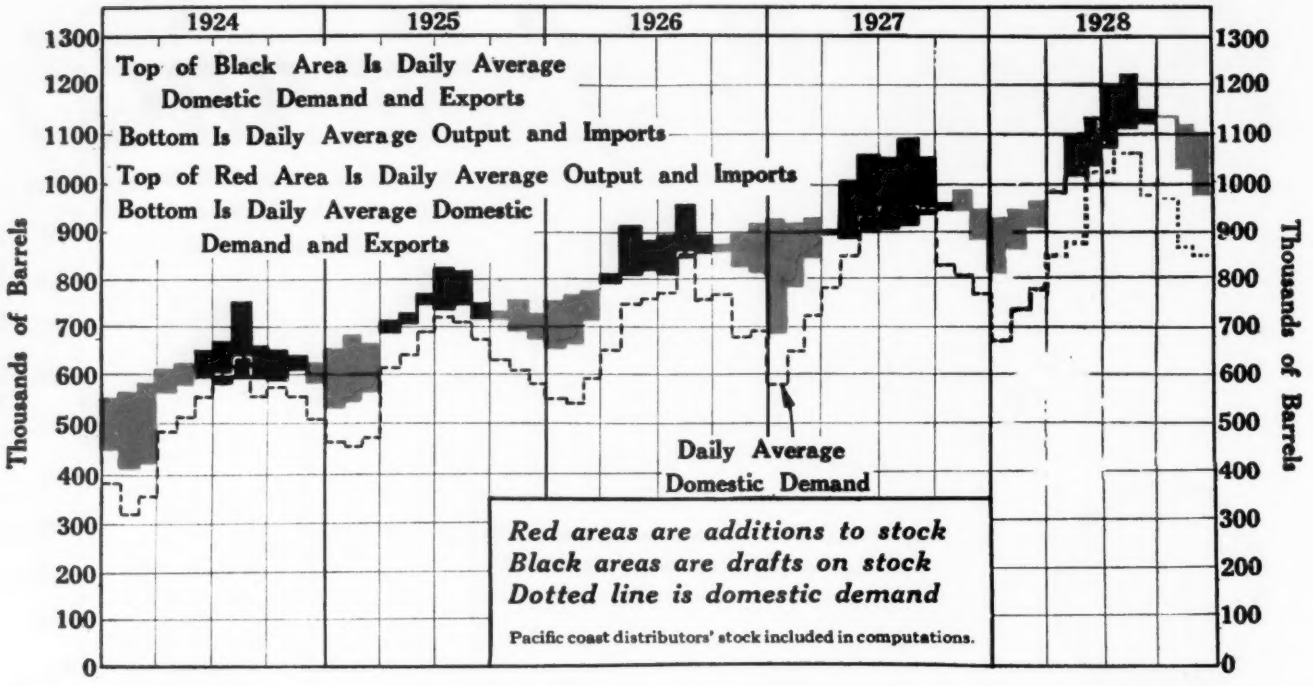
Gasoline Production and Consumption



December domestic production	1,094,000 Bbls. daily av.	December exports	123,000 Bbls. daily av.
December imports	14,000 Bbls. daily av.	Total indicated demand	982,000 Bbls. daily av.
Total new supply	1,108,000 Bbls. daily av.	Stocks Dec. 31, 1928	33,066,000 Bbls.
December domestic shipments	859,000 Bbls. daily av.	Increase in stocks in December	3,881,000 Bbls.
		Stocks Dec. 31, 1927	33,316,000 Bbls.

natural gasoline. Proportion of production of straight run gasoline was 2 points more than in November and of cracked gasoline 2 points less. The relative volume of natural gasoline used was unchanged.

Daily average shipments of gasoline were 54,836 barrels or 5.37 per cent less than in November. Only in California were shipments larger than in November, the gain at Pacific coast plants being 27,658 barrels or 14.66 per cent.

California refineries reduced their stocks of gasoline 10,000 barrels in December. Stocks at plants in all other districts were increased. Stocks Dec. 31, 1928, were larger than stocks Dec. 31, 1927, in the East Coast, Appalachian, Indiana-Illinois, Oklahoma-Kansas, and Louisiana-Arkansas districts. The largest decline in stocks over the year was in California where the reduction was 2,879,000 barrels.

Shipments of California gasoline

Gasoline Supply and Demand — Barrels

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1927	27,960,000	520,000	3,557,000	17,888,000	46,058,000
February	25,024,000	416,000	3,544,000	18,240,000	49,714,000
March	27,886,000	493,000	3,219,000	22,646,000	52,410,000
April	26,577,000	377,000	3,614,000	23,371,000	52,379,000
May	26,787,000	490,000	4,468,000	26,579,000	48,609,000
June	26,616,000	590,000	4,248,000	27,799,000	43,768,000
July	28,118,000	190,000	3,223,000	29,784,000	39,069,000
August	28,010,000	348,000	4,193,000	29,779,000	33,455,000
September	27,716,000	515,000	3,539,000	28,409,000	29,738,000
October	28,903,000	365,000	3,959,000	25,497,000	29,550,000
November	28,558,000	417,000	3,724,000	24,400,000	30,401,000
December	28,512,000	282,000	3,154,000	23,718,000	*33,316,000
1927 Total	†330,435,000	†5,002,000	†44,337,000	†296,807,000	.....
January, 1928	27,879,000	562,000	3,713,000	20,939,000	36,112,000
February	26,775,000	372,000	3,341,000	21,136,000	38,782,000
March	29,245,000	259,000	4,016,000	24,041,000	40,229,000
April	29,332,000	472,000	4,111,000	25,712,000	40,210,000
May	30,825,000	368,000	6,712,000	27,355,000	37,336,000
June	30,675,000	212,000	4,808,000	29,022,000	34,393,000
July	32,884,000	267,000	5,167,000	31,985,000	30,392,000
August	34,037,000	479,000	4,563,000	33,148,000	27,197,000
September	33,543,000	193,000	4,837,000	29,691,000	26,405,000
October	34,319,000	388,000	4,049,000	30,610,000	26,453,000
November	*33,171,000	304,000	4,678,000	*26,052,000	29,075,000
December	33,907,000	420,000	3,802,000	26,644,000	33,066,000
1928 Total	†377,183,000	4,296,000	53,797,000	†327,932,000	33,066,000

*Revised †Revised totals to be shown in Bureau of Mines yearly summaries to be issued soon.

Gasoline Situation by Districts — Barrels

Districts	December Daily Avg. Output	November Daily Avg. Output	December Change %	December Daily Avg. Shipments	November Daily Avg. Shipments	December Change %	Stocks December 1928	Stocks November 1928	Stocks December 1927	
East Coast	151,097	151,667	— 0.37	125,064	146,600	—14.69	5,537,000	4,730,000	4,748,000	East Coast
Appalachian	45,387	45,700	— 0.68	35,935	41,500	—13.41	1,229,000	936,000	1,035,000	Appalachian
Ind., Ill., etc.	164,742	171,100	— 3.72	136,387	152,033	—10.29	5,099,000	4,220,000	3,734,000	Ind., Ill., etc.
Okla., Kans., etc.	167,161	170,367	— 1.88	133,806	152,467	—12.24	3,691,000	2,657,000	2,983,000	Okla., Kans., etc.
Texas	223,258	245,167	— 8.93	213,097	226,467	— 5.90	4,863,000	4,548,000	4,889,000	Texas
La. and Ark.	81,677	80,767	+ 1.13	72,839	73,600	— 1.03	2,158,000	1,884,000	1,491,000	La. and Ark.
Rocky Mountain	44,516	46,633	— 4.54	31,645	38,600	—18.02	1,568,000	1,169,000	1,643,000	Rocky Mountain
California	215,935	195,866	+10.25	216,258	188,600	+14.66	8,921,000	8,931,000	11,800,000	California
U. S. Total	1,093,773	1,107,267	— 1.22	965,031	1,019,867	— 5.37	33,066,000	*29,075,000	32,323,000	U. S. Total
Texas Gulf Coast	170,000	190,467	—10.75	160,871	175,467	— 8.32	4,063,000	3,780,000	4,197,000	Texas Gulf Coast
La. Gulf Coast	61,645	61,233	+ 0.67	33,323	54,367	—38.71	1,979,000	1,721,000	1,413,000	La. Gulf Coast

*Bureau of Mines gives revised total but no revisions for various districts.

REPUTATIONS come hard and go easy

. . . protect yours

The station that sells Phillips 66 enjoys *insured reputation.* Its customers are satisfied and loyal —they keep coming back for more—because this superior gasoline of Controlled Volatility gives them easy starting, rapid acceleration, power, mileage to a degree they've never known before. Such customers are a mighty valuable asset. They're profit builders. Let Phillips 66 help you build up a big list of loyal, steady customers. . . . Write or wire for quotations.

Backed by a tremendous organization engaged in the production of a line of superior motor fuels including "Phillips 66," "Phillips Aviation" and "Phillips Benzo-Gas." The vast experience of the research department of this company is offered to jobbers and refiners on any problem in *controlled volatility.*

Phillips 66

Phillips Petroleum Company

Bartlesville, Oklahoma

NATURAL GASOLINE FOR CONTROLLED VOLATILITY

PRODUCING REFINING TRANSPORTING MARKETING

Make the passing motorist — a satisfied customer

The motorist who stops for the first time—*he is your prospect*, judging you by your service and the products you sell.

How will you impress him? Will he come back? If you are selling Cushing Thoroughbred Petroleum Products — *he will!* Like all thoroughbreds their quality is easily distinguishable, performing their work as the thoroughbred should. Unexcelled in quality or service, Cushing Petroleum Products will help you build business by holding it.

Let us furnish you with details — a card will do.

A wire or letter will bring quotations
58-60 U. S. Motor Gasoline
64-66-375 E. P. Aviation
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38-40 Straw Distillate
32-36 Gas Oil Uncracked
22-26 Fuel Oil (Cushing or
24-26 Fuel Oil Blackwell)

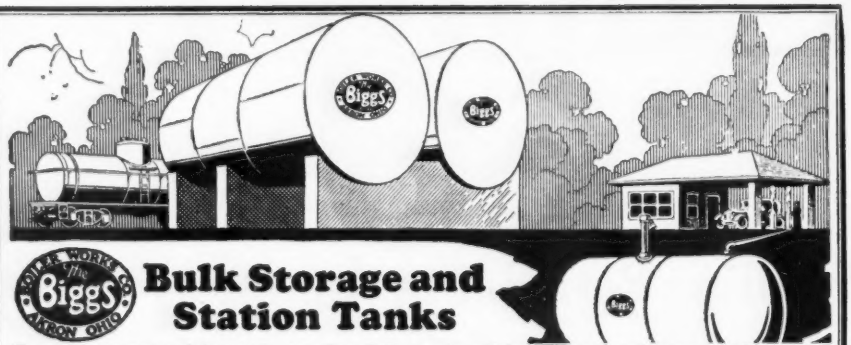
General Offices CUSHING, OKLAHOMA

CUSHING

GRIGG

Refining & Gasoline Co.

Refineries At CUSHING & BLACKWELL, OKLAHOMA



The Biggs Boiler Works Co. Akron Ohio

Bulk Storage and Station Tanks

Forty years successful experience; plant fully equipped for fabricating plate up to 1¼" thick.
Pressure Stills for Cracking Process - Fractionating Towers - Dephlegmating Towers, Bubble Towers - Heat Exchangers - Agitators - Steam Stills - Crude Stills - Condenser Boxes, Run Down Tanks - Blending Tanks - Hemispherical Tanks - Blow Cases - Acid Tanks, Compounding Kettles - Storage Tanks to 80,000 Barrels - Smoke Stacks and Breechings, etc.

THE BIGGS BOILER WORKS COMPANY, Buchtel and Bank Streets, AKRON, OHIO
Eastern Sales Office: 300 Madison Ave., New York *Western Sales Office:* 35 South Dearborn St., Chicago

to eastern ports of the United States in December totaled 1,887,000 barrels, as compared with 1,288,000 barrels in November. These shipments in 1928 totaled 16,779,000 barrels, as compared with 11,675,000 barrels in 1927.

The gasoline situation in 1928 in relation to the 1927 situation was as follows:

1. Domestic production was 46,748,000 barrels or 14.14 per cent *more* in 1928.

2. Imports were 706,000 barrels or 14.11 per cent *less*.

3. Total new supply was 46,042,000 barrels or 13.72 per cent *more*.

4. Domestic demand was 31,125,000 barrels or 10.48 per cent *more*.

5. Exports were 9,460,000 barrels or 21.33 per cent *more*.

6. Total demand was 40,585,000 barrels or 10.63 per cent *more*.

7. Stocks Dec. 31, 1928, were 250,000 barrels or 0.75 per cent *less* than stocks Dec. 31, 1927.

Of the 377,183,000 barrels of gasoline production in 1928, 219,437,000 barrels or 58 per cent was straight run; 122,381,000 barrels or 33 per cent cracked, and 35,365,000 barrels or 9 per cent natural gasoline. The proportion of gasoline produced from crude was 37.55 per cent of the 910,204,000 barrels of crude oil charged to stills during the year.

Natural Gasoline

Production of natural gasoline averaged 1251 barrels a day more in December than in November. Stocks rose 203,857 barrels in December, the largest gains being in the Mid-Continent.

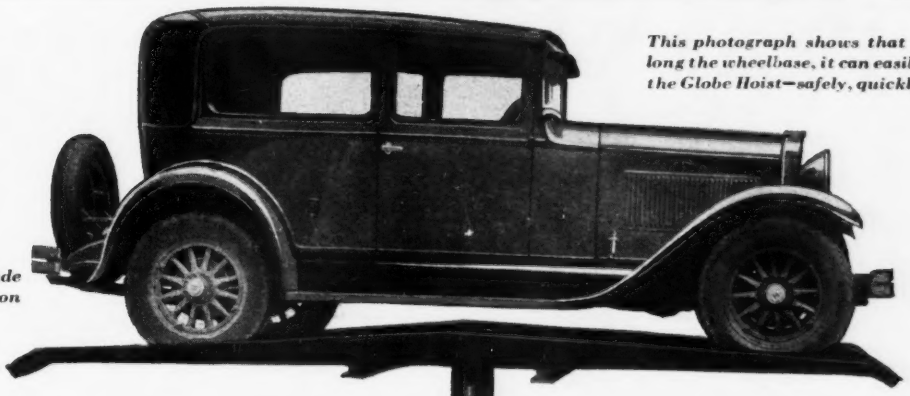
Production of blended motor fuels was less than in November but stocks increased more than 2000 barrels.

Kerosene

Daily average output of kerosene fell 3344 barrels or 2.04 per cent in December from November output, chiefly because of a curtailment of more than 5000 barrels daily in the Texas district. Production also was reduced in the Appalachian and Oklahoma-Kansas districts. Daily average shipments of kerosene from refineries was 1884 barrels or 1.22 per cent more in December than in November. Gains were made in the East Coast, Indiana-Illinois, Oklahoma-Kansas and California districts. Stocks were lowered in the East Coast, Indiana-Illinois, and Louisiana-Arkansas districts. Stocks were smaller Dec. 31, 1928, than Dec. 31, 1927, in the East Coast and Appalachian districts.

The kerosene situation in 1928 compares with that in 1927 as follows:

1. Domestic production was 4,043,-



This photograph shows that no matter how long the wheelbase, it can easily be handled by the Globe Hoist—safely, quickly, conveniently.

Globe Hoists are made in two types—roll-on and free wheel.

"ACCEPTED"

Wherever the Globe Hoist has been shown, it has been accepted as mechanically right. Wherever the Globe "hi-preg" principle has been explained, it has been accepted as sound. Marketers universally have accepted Globe as the Hoist that obviously has these mechanical advantages:

1. **Unusually easy, economical installation—$15 to $25 per Hoist. Cylinder and oil tank one unit.**
2. **Year-round availability—oil viscosity stays same winter and summer. Oil always below frost line.**
3. **Design of Hoist permits quicker work, with fewer lost motions—less labor cost per car.**
4. **Hoist always fully rotating—never binds at any height. No packing of any kind.**
5. **No depression around top of Globe piston—no place for water, ice or oil to collect. Globe Hoist can safely be used for washing cars.**
6. **Complete safety.**

What is the Globe "hi-preg" (cup leather) principle?

The Globe Machinery & Supply Company has been for more than ten years the world's largest manufacturer of pneumatic dumps for grain elevator use. Operated on the sound, simple and lifelong "hi-preg" (or cut leather) principle, these dumps secured rapid acceptance in the grain elevator trade, with the result that today three out of every five grain elevators equipped with grain dumps (or lifts) are equipped with a Globe. Many of these Globe dumps have been in continuous operation for 10 years, without requiring so much as a cup leather replacement —*not one cent spent for repairs!*

Thus, the "hi-preg" principle has been thoroughly tested. It operates as follows:

The Globe Hoist is raised or lowered within the cylinder, by oil in contact with the lower end of the piston—the oil being contested by air pressure. The necessary perfect seal is maintained by a leather ring, or cup, at the lower end of the piston. As the oil is forced (by air pressure) against the piston, the leather is hydraulically held against the honed inner surface of the cylinder. There is no slightest escape of the oil—there can be none. The cup leather holds tight and the lifting piston is always dry. These leathers are good from three to five years. When replacement is necessary the job requires about 25 minutes.

* * *

"I am more than pleased with the Globe Hoist installed in my station. It works smoothly and perfectly at all times and has enabled me to more than double my greasing business. If I had to give up either my Globe Hoist or two of my gas pumps, I'd keep the Hoist." A. A. Sheahan, 808 Lincoln Way, Ames, Iowa.

* * *

"The Globe Hoist has been a real business getter for us. We have used it in a great number of cases to sell customers on the idea of letting us do all of their oiling, greasing and general service work. It is simple, economical, mechanically perfect, and we estimateth at in three months' time it won't owe us a dime." M. & M. Garage, East 14th & Euclid Ave., Des Moines, Iowa.

GLOBE HOIST

SAFER - QUICKER - BETTER

And more. Globe provides each Hoist purchaser with a complete merchandising service—and why buy a hoist unless you are going to make money with it? Our Handbook tells how to make more sales, attract more customers, build more profits. Every Globe customer gets this Handbook FREE—yet pays no more for a genuine Globe Hoist than for a lift of inferior or more complicated construction. *The Globe Hoist is the one best buy today!* Use the coupon, and get our February offer for immediate installations.

GLOBE MACHINERY & SUPPLY CO.

GLOBE MACHINERY & SUPPLY CO.
205 West Court Ave., Des Moines, Iowa

Send me full details on the Globe Hoist and your plan to get more greasing jobs for our service station.

Name.....

Address.....

Natural Gasoline and Motor Blends — Barrels

Districts	Daily Avg. Production Dec. (Net)	Daily Avg. Production Nov. (Net)	Stocks End of December	Stocks End of November	Motor Fuel Blends Made in Dec.	Motor Fuel Blends Made in Nov.	Stocks Blends End of Dec.	Stocks Blends End of Nov.	
Appalachian	8,141	7,302	58,000	48,381	6,738	5,690	5,571	5,619	Appalachian
Ill., Ky., etc.	1,152	794	6,762	6,690	95	452	167	143	Ill., Ky., etc.
Oklahoma	43,779	43,968	247.428	168,928	93,667	101,453	15,571	13,619	Oklahoma
Kansas	2.534	2,540	22,738	21,238	738	738	167	167	Kansas
Texas	23,963	24,127	193,452	89,214	21,714	21,405	3,714	3,643	Texas
Louisiana	3,917	3,809	28.310	20,833	1,119	1,071	500	428	Louisiana
Arkansas	2,074	2,063	8,000	6,167	.....	.....	24	24	Arkansas
Rocky Mountain	2,918	3,095	15,571	15,286	.....	.....	.....	.....	Rocky Mountain
California	38,249	37,778	27,833	27,500	.....	Not Avail.	.....	Not Avail.	California
U. S. Total	126,727	125,476	608,094	404,237	124,071	130,809	25,714	23,643	U. S. Total

Lubricant Situation by Districts — Barrels

Districts	December Daily Avg. Output	November Daily Avg. Output	December Change %	December Daily Avg. Shipments	November Daily Avg. Shipments	December Change %	Stocks December 1928	Stocks November 1928	Stocks December 1927	
East Coast	28,129	28,667	— 1.87	26,710	23,767	+12.38	2,773,000	2,729,000	2,629,000	East Coast
Appalachian	14,129	13,633	+ 3.64	14,548	13,267	+ 9.65	1,220,000	1,233.000	1,095,000	Appalachian
Ind., Ill., etc.	10,258	10,533	— 2.61	8,484	9,967	—14.88	805.000	750.000	840,000	Ind., Ill., etc.
Okla., Kans., etc.	7,645	7,967	— 4.04	6,677	7,033	— 5.06	480,000	450,000	512,000	Okla., Kans., etc.
Texas	26,064	21,100	+23.52	18,032	23,467	—23.16	1,899,000	1,650,000	1,671,000	Texas
La. and Ark.	1,839	2,800	—34.32	1,839	2,733	—32.71	103,000	103,000	114,000	La. and Ark.
Rocky Mountain	1,581	1,667	— 5.16	839	967	—13.24	181.000	158,000	127.000	Rocky Mountain
California	6,903	5,233	+31.91	5,903	7,366	—19.86	879,000	848,000	872,000	California
U. S. Total	96,548	91,600	+ 5.40	83,032	88,567	— 6.25	8,340,000	7,921,000	7,860,000	U. S. Total
Texas Gulf Coast	25,032	20,300	+23.31	17,290	22,533	—23.27	1,817,000	1,577,000	1,606,000	Texas Gulf Coast
La. Gulf Coast	1,677	2,667	—37.12	6,903	2,600	+165.50	101,000	101,000	113,000	La. Gulf Coast

000 barrels or 7.20 per cent *more* in 1928.

2. Imports were 149,000 barrels or 270.99 per cent *more*.

3. Total new supply was 4,192,000 barrels or 7.46 per cent *more*.

4. Domestic demand was 483,000 barrels or 1.29 per cent *less*.

5. Exports were 2,529,000 barrels or 12.94 per cent *more*.

6. Total demand was 3,012,000 barrels or 5.28 per cent *more*.

7. Stocks Dec. 31, 1928, were 1,286,000 barrels or 16.67 per cent *more* than stocks Dec. 31, 1927.

Lubricating Oils

Daily average production of lubricating oils was increased 4948 barrels or 5.40 per cent in December over November output, increases coming in the Appalachian, Texas and California districts. Shipments averaged 5535 barrels or 6.25 per cent less than November shipments. December shipments exceeded November shipments in only the East Coast and Appalachian districts. Stocks were lowered in only the Appalachian district. Stocks in the Louisiana-Arkansas district were unchanged.

Dec. 31, 1928, stocks were lower than Dec. 31, 1927 stocks in the Indiana-Illinois, Oklahoma-Kansas and Louisiana-Arkansas districts.

The lubricating oil situation in 1928 compares with that in 1927 as follows:

1. Domestic output was 1,938,000 barrels or 5.92 per cent *more* than in 1928.

2. Imports were 5000 barrels or 62.5 per cent *more*.

3. Total new supply was 1,943,000 barrels or 6.12 per cent *more*.

4. Domestic demand was 1,468,000 barrels or 6.77 per cent *more*.

5. Exports were 1,279,000 barrels or 13.08 per cent *more*.

6. Total demand was 2,747,000 barrels or 8.73 per cent *more*.

7. Stocks Dec. 31, 1928, were 480,-

Kerosene Supply and Demand — Barrels

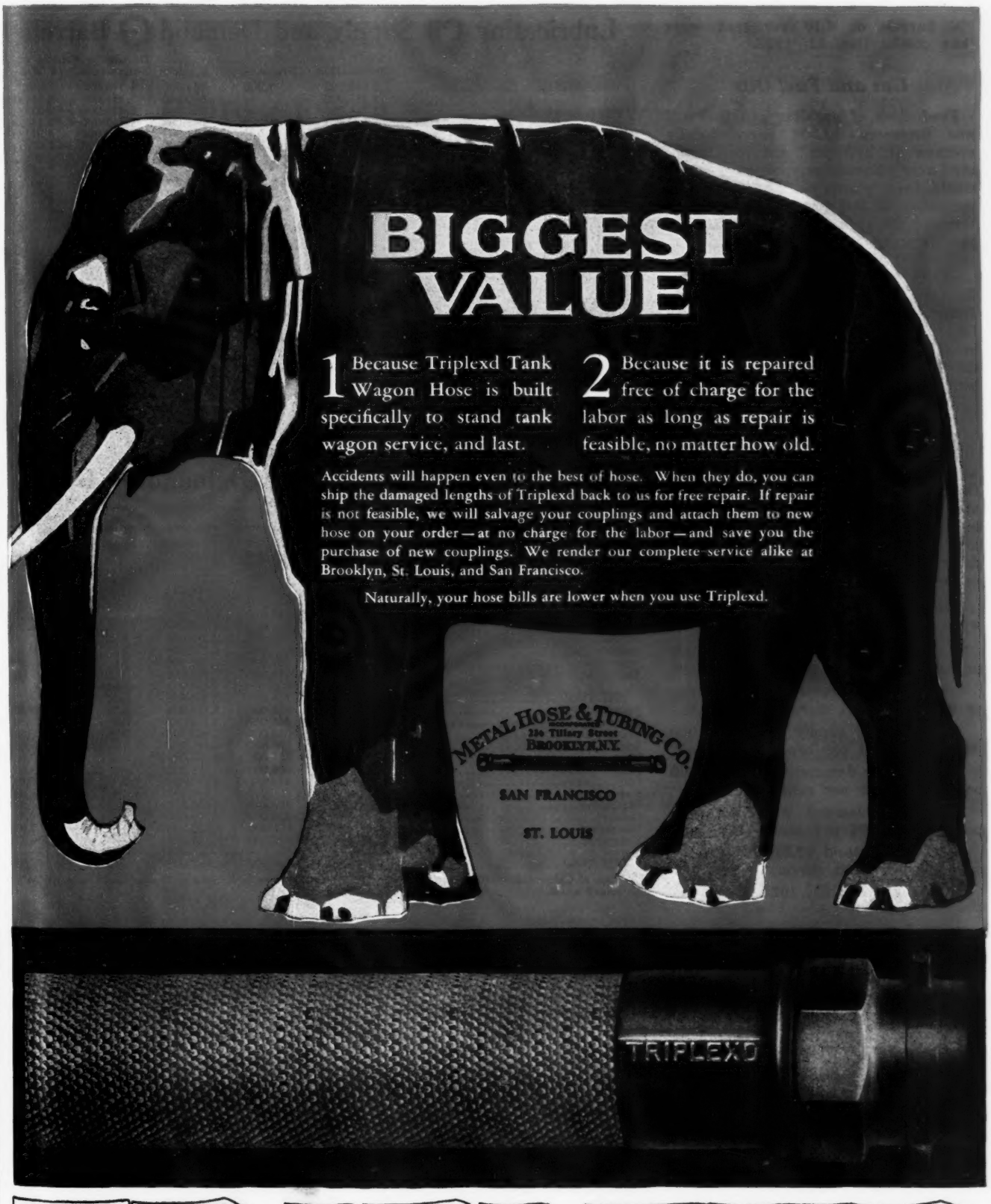
	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1927	5,113.000	.....	1,616.000	3,882.000	8,190.000
February	4,453.000	1,000	1,399.000	2,590.000	8,655.000
March	4,802.000	3.000	1,351.000	3,356.000	8,753.000
April	4,608,000	1,000	1 861.000	2,776.000	8,725.000
May	4,663,000	1,000	1,633,000	3,188,000	8,568,000
June	4.308.000	2,000	1,616.000	2,695.000	8.567.000
July	4,484.000	.....	1,376.000	2,637.000	9.038.000
August	4,420.000	4,000	1,700.000	3,389.000	8,373.000
September	4,686.000	.....	1.659.000	3,280.000	8,120.000
October	4,884.000	1.000	2,211.000	3,469.000	7,325.000
November	4,824.000	27.000	1,821.000	2,514.000	7.841.000
December	4,869.000	15.000	1,237.000	3,819.000	*7,715.000
1927 Total	56,113.000	55.000	†19,537.000	†37.491.000	.....
January, 1928	5.047.000	46.000	2,350.000	2,742.000	7,670.000
February	4,783.000	11.000	1,551.000	3,221.000	7,692.000
March	4,717.000	6.000	1,852.000	2,737 000	7,826.000
April	5,033.000	20.000	1,912.000	3,234 000	7,733.000
May	5,243,000	1,000	2,057.000	3,383,000	7,537,000
June	4,849.000	24 000	1,655.000	2,385.000	8,370 000
July	4,994.000	19.000	1,834.000	3,079.000	8,470.000
August	5,389.000	2,000	1,678.000	3,261.000	8,922.000
September	5,037.000	.....	2.090.000	3,276,000	8,593.000
October	5,186 000	55,000	1,755.000	3,465.000	8,614.000
November	4,908.000	.....	2,091,000	*2,545,000	*8,886,000
December	4,968,000	20,000	1,241,000	3,632,000	9,001,000
1928 Total	†60,156,000	204,000	22,066,000	†37,008,000	9,001,000

*Revised †Revised totals to be shown in Bureau of Mines yearly summaries to be issued soon.

Kerosene Situation by Districts — Barrels

Districts	December Daily Avg. Output	November Daily Avg. Output	December Change %	December Daily Avg. Shipments	November Daily Avg. Shipments	December Change %	Stocks December 1928	Stocks November 1928	Stocks December 1927	
East Coast	21,483	21,333	+ 0.70	28,291	16,000	+76.82	1,288.000	1,499,000	1,401,000	East Coast
Appalachian	9,903	10,200	— 2.91	9,193	10,600	—13.27	312,000	290,000	316,000	Appalachian
Ind., Ill., etc.	16,903	16,433	+ 2.86	19,484	17,367	+12.19	1,286,000	1,366,000	1,004,000	Ind., Ill., etc.
Okla., Kans., etc.	25,677	26,500	— 3.10	25,000	24,167	+ 3.44	729,000	708,000	605,000	Okla., Kans., etc.
Texas	36,193	41,867	—13.55	34,548	43,033	—19.72	1,565.000	1,514,000	1,322,000	Texas
La. and Ark.	15,839	15,067	+ 5.12	17,742	24,433	—27.38	946,000	1,005,000	937,000	La. and Ark.
Rocky Mountain	4,774	4,367	+ 9.32	2,355	2,867	—17.86	366.000	291,000	350,000	Rocky Mountain
California	29,484	27,833	+ 5.93	19,871	16,133	+23.17	2,509,000	2,211,000	1,734,000	California
U. S. Total	160,256	163,600	— 2.04	156,484	154,600	+ 1.22	9,001.000	*8,884,000	7,669,000	U. S. Total
Texas Gulf Coast	28,742	33,533	—14.29	26,322	34,267	—23.18	1,472,000	1,397,000	1,236,000	Texas Gulf Coast
La. Gulf Coast	14,226	13,500	+ 5.38	16,097	22,900	—29.71	927,000	985,000	911,000	La. Gulf Coast

*Bureau of Mines gives revised total but no revisions for various districts.


BIGGEST
VALUE
1 Because Triplexd Tank Wagon Hose is built specifically to stand tank wagon service, and last.
2 Because it is repaired free of charge for the labor as long as repair is feasible, no matter how old.
Accidents will happen even to the best of hose. When they do, you can ship the damaged lengths of Triplexd back to us for free repair. If repair is not feasible, we will salvage your couplings and attach them to new hose on your order—at no charge for the labor—and save you the purchase of new couplings. We render our complete service alike at Brooklyn, St. Louis, and San Francisco.
Naturally, your hose bills are lower when you use Triplexd.
METAL HOSE & TUBING CO.
226 Tillary Street
BROOKLYN, N.Y.
SAN FRANCISCO
ST. LOUIS
TRIPLEXD

TRIPLEXD
GASOLINE TANK HOSE

000 barrels or 6.10 per cent *more* than stocks Dec. 31, 1927.

Gas and Fuel Oils

Production of gasoline and fuel oils was increased 12,300 barrels daily average or 1.03 per cent in December over November output. Shipments from plants east of California increased 52,458 barrels daily average and stocks were lowered 3,048,000 barrels when shipments exceeded output by 95,225 barrels daily.

Stocks of fuel and gas oils east of California were reduced in all refining districts. Stocks were lower Dec. 31, 1928, than on Dec. 31, 1927, in only the East Coast district where the reduction was more than 50 per cent.

Paraffin Wax

There was a decrease in domestic production and imports of wax in December as compared with output and imports in November and a gain in export demand. Domestic demand totaled slightly more in December but daily average demand was a little under the November demand.

The wax situation in 1928 compares with that in 1927 as follows:

1. Domestic output was 46,105,000 pounds or 7.89 per cent *more* in 1928.
2. Imports were 4,286,000 pounds or 20.94 per cent *more*.
3. Total new supply was 50,391,000 pounds or 8.33 per cent *more*.
4. Domestic demand was 21,060,000 pounds or 7.45 per cent *more*.
5. Export demand was 51,200,000 pounds or 15.04 per cent *more*.
6. Total demand 72,260,000 pounds or 11.60 per cent *more*.
7. Stocks Dec. 31, 1928, were 40,-

Lubricating Oil Supply and Demand — Barrels

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1927	2,570,000	1,000	864,000	1,496,000	7,867,000
February	2,345,000	.....	620,000	1,231,000	8,361,000
March	2,754,000	1,000	895,000	2,334,000	8,035,000
April	2,615,000	1,000	763,000	1,712,000	8,176,000
May	2,625,000	1,000	863,000	1,928,000	8,011,000
June	2,571,000	1,000	758,000	2,197,000	7,628,000
July	2,672,000	.....	993,000	1,811,000	7,496,000
August	2,752,000	1,000	754,000	2,004,000	7,491,000
September	2,782,000	.....	861,000	1,965,000	7,447,000
October	2,757,000	1,000	839,000	1,782,000	7,584,000
November	2,477,000	.....	798,000	1,739,000	7,524,000
December	2,801,000	1,000	802,000	1,663,000	7,860,000
1927 Total	31,721,000	8,000	†9,776,000	†21,669,000	.....
January, 1928	2,658,000	.....	934,000	1,606,000	7,978,000
February	2,728,000	.....	841,000	1,533,000	8,332,000
March	2,905,000	.....	837,000	1,988,000	8,412,000
April	3,026,000	1,000	1,059,000	2,362,000	8,018,000
May	3,091,000	3,000	1,063,000	1,989,000	8,060,000
June	3,009,000	1,000	1,095,000	2,143,000	7,832,000
July	2,827,000	1,000	1,063,000	1,930,000	7,667,000
August	2,891,000	1,000	813,000	2,035,000	7,711,000
September	2,833,000	1,000	808,000	1,973,000	7,764,000
October	2,979,000	1,000	769,000	2,145,000	7,830,000
November	2,748,000	1,000	895,000	1,763,000	7,921,000
December	2,993,000	3,000	878,000	1,699,000	8,340,000
1928 Total	34,659,000	13,000	11,055,000	†23,137,000	8,340,000

†Revised totals to be shown in Bureau of Mines yearly summaries to be issued soon.

Gas and Fuel Oil Supply and Demand — Barrels

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1927	32,936,000	660,000	3,732,000	.....	*23,195,000
February	30,185,000	1,053,000	3,812,000	.....	*22,099,000
March	32,377,000	525,000	3,657,000	.....	*22,561,000
April	31,856,000	805,000	3,325,000	.....	*23,732,000
May	33,499,000	826,000	4,544,000	.....	*26,059,000
June	31,691,000	851,000	4,278,000	.....	*26,590,000
July	33,693,000	849,000	4,047,000	.....	*28,890,000
August	34,098,000	391,000	4,639,000	.....	*30,346,000
September	32,339,000	341,000	3,258,000	.....	*31,631,000
October	34,045,000	667,000	4,206,000	.....	*33,191,000
November	32,594,000	704,000	4,013,000	.....	*33,637,000
December	33,029,000	451,000	3,828,000	.....	*31,982,000
1927 Total	†393,066,000	8,124,000	†47,391,000	.....	.....
January, 1928	32,271,000	553,000	4,175,000	.....	*29,623,000
February	30,944,000	666,000	3,420,000	.....	*29,011,000
March	34,071,000	848,000	3,969,000	.....	*29,170,000
April	33,857,000	1,176,000	4,211,000	.....	*29,499,000
May	35,620,000	323,000	3,612,000	.....	*32,887,000
June	35,565,000	468,000	4,238,000	.....	*36,015,000
July	36,941,000	484,000	4,261,000	.....	*37,410,000
August	37,449,000	515,000	3,420,000	.....	*39,761,000
September	37,059,000	397,000	3,226,000	.....	*40,067,000
October	37,011,000	320,000	3,356,000	.....	*39,626,000
November	35,721,000	411,000	3,320,000	.....	†*3878,7,000
December	37,293,000	646,000	3,254,000	.....	*34,926,000
1928 Total	‡425,755,000	‡7,268,000	44,462,000	.....	*34,926,000

*East of California. †Revised ‡Revised totals to be shown in Bureau of Mines yearly summaries to be issued soon.

Gas and Fuel Oil Situation by Districts — Barrels

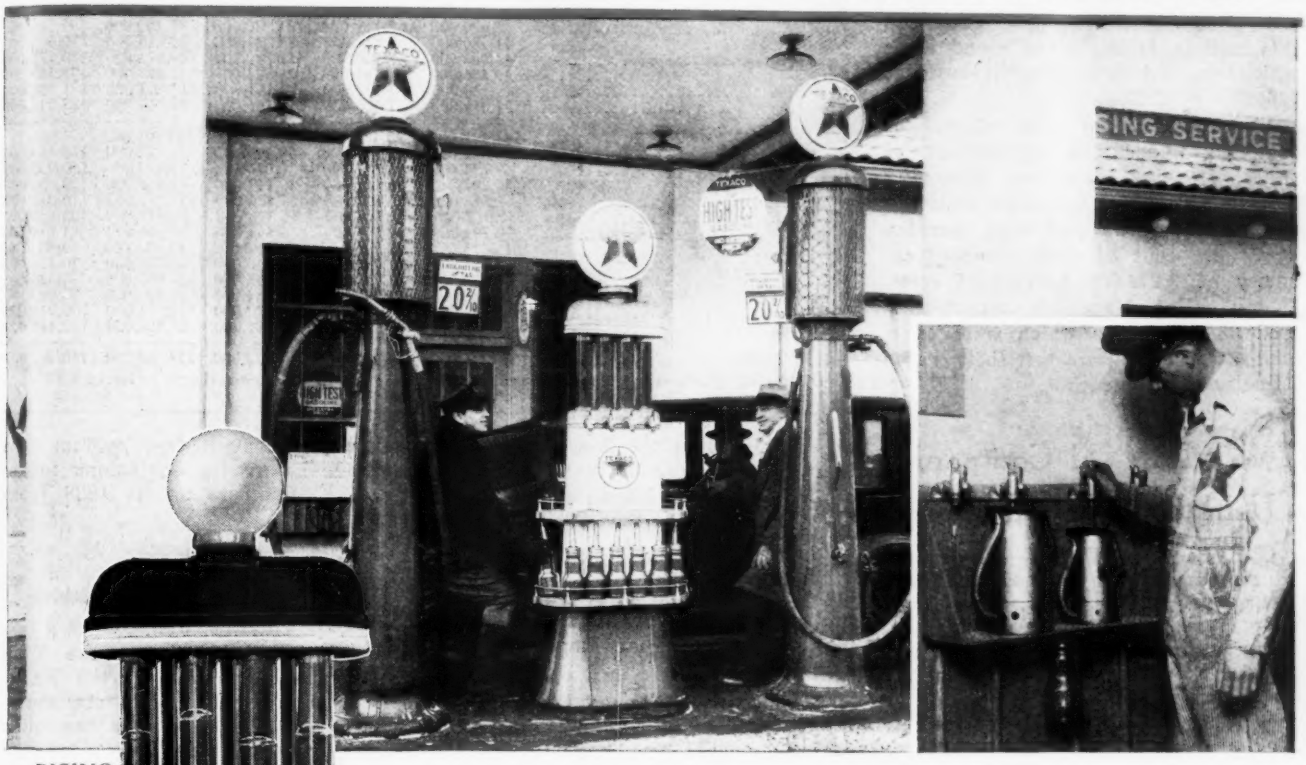
Districts	December Daily Avg. Output	November Daily Avg. Output	December Change %	December Daily Avg. Shipments	November Daily Avg. Shipments	December Change %	Stocks December 1928	Stocks November 1928	Stocks December 1927	
East Coast	263,774	251,167	+ 5.02	305,903	275,667	+10.97	5,360,000	6,666,000	11,209,000	East Coast
Appalachian	20,161	21,267	— 5.20	21,064	21,067	— 0.01	1,190,000	1,218,000	1,068,000	Appalachian
Ind., Ill., etc.	93,485	95,100	— 1.70	119,613	103,100	+16.01	2,771,000	3,581,000	1,434,000	Ind., Ill., etc.
Okla., Kans., etc.	102,097	95,800	+ 6.57	104,193	110,800	— 6.34	6,385,000	6,450,000	5,205,000	Okla., Kans., etc.
Texas	219,064	234,733	— 6.67	239,903	235,433	+ 1.90	11,952,000	12,608,000	8,727,000	Texas
La. and Ark.	107,290	101,667	+ 5.53	110,645	107,500	+ 2.92	6,070,000	6,174,000	3,681,000	La. and Ark.
Rocky Mountain	14,968	16,867	—11.26	17,516	18,100	— 3.23	1,198,000	1,277,000	658,000	Rocky Mountain
California	382,161	374,100	+ 2.15	.....	.....	.....	.....	.....	.....	California
U. S. Total	1,203,000	1,190,700	+ 1.03	1,298,225	1,245,767	+ 4.21	34,926,000	*37,974,000	31,982,000	U. S. Total
Texas Gulf Coast	150,032	165,067	— 9.11	168,839	163,667	+ 3.16	9,242,000	9,825,000	7,004,000	Texas Gulf Coast
La. Gulf Coast	66,000	58,133	+13.53	70,322	62,000	+13.42	5,033,000	5,167,000	3,120,000	La. Gulf Coast

*Bureau of Mines gives revised total as 37,878,000 bbls., but no revisions were published for stocks in various districts.

Coke, Asphalt, Miscellaneous Products

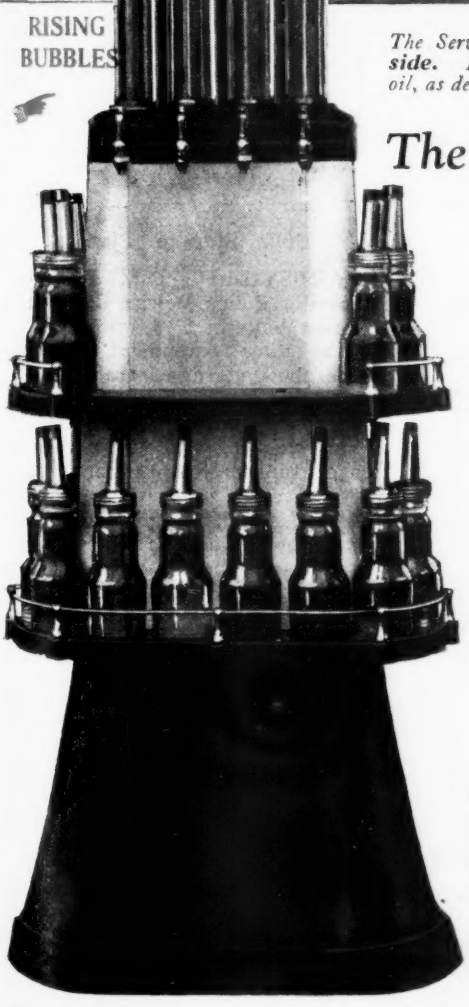
	Coke Output (Tons)	Coke Stocks (Tons)	Asphalt Output (Tons)	Asphalt Stocks (Tons)	Miscel. Products Output (Bbls.)	Miscel. Products Stocks (Bbls.)	Unfin. Oil Output (Bbls.)	Unfin. Oil Stocks (Bbls.)	Losses (Bbls.)	
January, 1928	103,000	330,400	198,900	209,300	613,000	1,176,000	2,297,000	35,843,000	2,128,000	January, 1928
February	100,000	337,000	208,500	230,300	635,000	1,297,000	2,198,000	36,030,000	1,969,000	February
March	107,200	352,400	270,000	268,700	661,000	1,527,000	2,247,000	35,601,000	2,258,000	March
April	109,400	342,100	273,900	273,700	656,000	1,601,000	2,475,000	36,463,000	2,223,000	April
May	118,400	348,300	330,700	262,200	879,000	1,392,000	2,792,000	37,073,000	2,398,000	May
June	118,100	343,700	331,600	270,800	892,000	1,130,000	2,307,000	36,999,000	2,547,000	June
July	127,000	384,900	329,400	251,400	929,000	1,200,000	2,811,000	39,647,000	2,806,000	July
August	136,100	402,100	316,400	225,500	991,000	857,000	2,530,000	39,096,000	2,666,000	August
September	119,100	379,900	305,600	202,900	873,000	748,000	2,226,000	39,732,000	2,653,000	September
October	124,700	394,400	320,900	211,300	867,000	726,000	1,961,000	38,456,000	2,642,000	October
November	131,000	418,800	246,700	227,800	738,000	730,000	2,822,000	38,137,000	2,390,000	November
December	132,000	436,900	169,800	235,500	677,000	635,000	3,166,000	38,601,000	2,275,000	December

Rising BUBBLES—*Action!*—*Attraction!*—OIL SALES!



The Servoilite Cabinet has ***4 faucets on each side.*** *It handles either 4, 5, 6, 7, or 8 grades of oil, as desired.*

The inside hook-up is an important feature of a Servoilite System. It is distinctly a convenience every day in the year.



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Give people what they want—action! That's what Servoilite does. Its striking display of the oil—of big glistening oil bubbles rising continuously in the glass tubes—grabs their attention.

It makes them look—makes them think of oil—makes them want it—And then they buy it!

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Servoilite 60 gallon tanks are placed out of sight. The cabinet is attractively finished, and only 29½ inches long. Thus you not only save valuable space but you give your station a necessary touch of smartness. An attractive outside denotes order and efficiency inside.

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Gentlemen: Send me complete story of Servoilite —No obligation, of course.

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294,000 pounds or 26.75 per cent *less* than stocks Dec. 31, 1927. In making this computation, the Dec. 31, 1927, stock figure used was 150,638,000 pounds which the Bureau of Mines says is on a comparable basis with the stock figure of Dec. 31, 1928. The 167,214,000 shown in the table with this article is on a different basis which was not defined in the bureau's report.

The bureau's December report was compiled under the supervision of G. R. Hopkins, petroleum economics division, from the operating statistics of 336 refineries which were operated at 78 per cent of their recorded capacity of 3,271,000 barrels of crude a day. The November report covered 338 refineries which were operated at 81 per cent of their rated capacity that month.

Paraffin Wax Supply and Demand — Pounds

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1927	54,114,000	460,000	29,228,000	17,842,000	192,835,000
February	47,363,000	2,048,000	23,623,000	20,171,000	198,452,000
March	53,644,000	910,000	28,205,000	23,461,000	201,340,000
April	48,917,000	1,505,000	25,421,000	15,322,000	211,019,000
May	46,267,000	729,000	25,228,000	25,458,000	207,329,000
June	44,938,000	400,000	24,200,000	29,659,000	198,808,000
July	47,979,000	2,789,000	25,970,000	32,105,000	191,501,000
August	41,576,000	2,656,000	34,229,000	20,859,000	180,645,000
September	47,888,000	3,040,000	31,780,000	29,621,000	170,172,000
October	49,476,000	887,000	28,342,000	21,826,000	170,367,000
November	48,146,000	3,132,000	32,541,000	17,404,000	171,700,000
December	54,039,000	1,906,000	30,569,000	29,862,000	*167,214,000
1927 Total	584,347,000	20,462,000	†340,423,000	†282,503,000	.....
January, 1928	55,320,000	1,117,000	39,712,000	16,878,000	150,485,000
February	49,724,000	1,337,000	38,036,000	13,477,000	150,033,000
March	50,207,000	1,767,000	40,147,000	41,060,000	120,800,000
April	57,548,000	2,996,000	34,122,000	37,212,000	110,010,000
May	51,072,000	1,855,000	34,826,000	24,472,000	103,639,000
June	50,792,000	1,715,000	33,594,000	30,563,000	91,989,000
July	45,273,000	2,226,000	35,290,000	19,722,000	84,476,000
August	54,084,000	2,793,000	31,446,000	30,771,000	79,136,000
September	50,670,000	1,880,000	26,396,000	20,960,000	84,330,000
October	54,546,000	1,930,000	26,281,000	22,736,000	91,789,000
November	56,665,000	2,994,000	25,170,000	*23,354,000	103,949,000
December	54,685,000	2,138,000	26,603,000	23,825,000	110,344,000
1928 Total	†630,144,000	24,748,000	391,623,000	†303,563,000	110,344,000

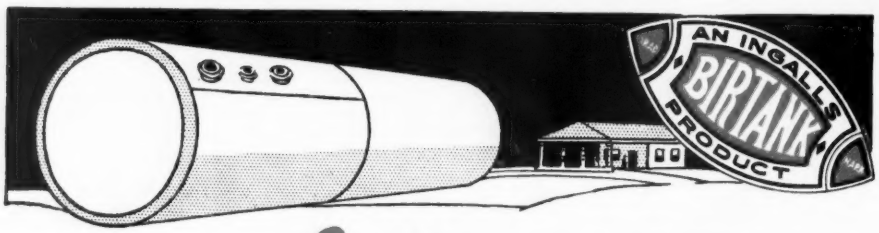
*Revised †Revised totals to be shown in Bureau of Mines yearly summaries to be issued soon.

Two More Oil Companies Using S.A.E. Numbers

CLEVELAND, Feb. 7.—Two more oil companies have notified NATIONAL PETROLEUM NEWS that they have adopted the S. A. E. viscosity numbers, although their names were omitted from the list of cooperating oil companies that was given out by the Society of Automotive Engineers and published in the Jan. 23 issue of NATIONAL PETROLEUM NEWS.

These are the Magnolia Petroleum Co., Dallas, and the Wadhams Oil Co., Milwaukee. Fred J. Bedford, manager of the lubricating department of the Magnolia states that the proper viscosity numbers are being marked on drums of Magnolene oils beginning Jan. 1.

C. G. Kittinger, manager motor oil department of Wadhams, says his company adopted the system and showed the grades equivalent to the S. A. E. numbers on its 1928 lubricating chart.



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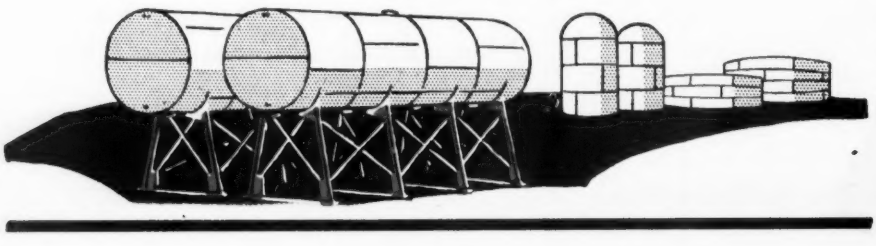


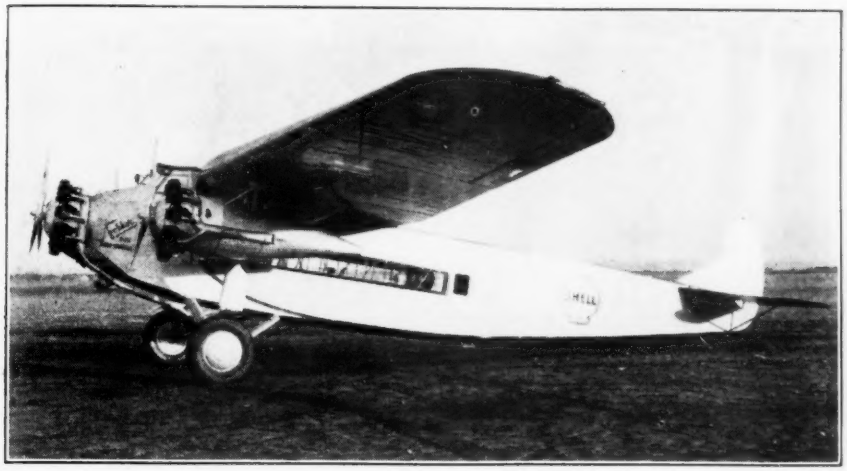
Minn. Jobbers Endorse Ethics

MINNEAPOLIS, Feb. 7.—At a special meeting held during the Twin City Automobile show at the Radisson hotel here, the Minnesota Petroleum Association adopted a resolution endorsing the code of marketing ethics recommended by the American Petroleum Institute, according to Paul E. Hadlick, secretary of the association. Mr. Hadlick was to be present at the hearing before the Federal Trade Commission in St. Louis on Feb. 11.

Bulk Storage Plans

SHARPSVILLE, Pa., Feb. 9.—Sharpsville Boiler Works Co., has off the press bulletin T 1 on its line of oil marketing equipment. Various types of bulk storage installations for various types of bulk plants are described and illustrated, as well as its arc-welded and riveted-welded storage tanks, compartment tanks, structural steel supports and saddles for tanks, and heating coils. A feature of the bulletin is a drawing in red and white of a typical layout for above-ground and under-ground bulk plants.

AKRON, Feb. 9.—Ray R. Gill, former assistant treasurer of the Federal Oil & Gas Co. here, has been named as state fire marshal by Governor Myers Y. Cooper. Mr. Gill was associated with his brother, E. B. Gill in the oil business here until about a year ago when he resigned to start a business in Cleveland, but disposed of that business to enter the campaign in behalf of Governor Cooper.



Shell Plane on Maiden Flight

HOUSTON, Feb. 12.—The "Gold Shell," super-Fokker tri-motored cabin flag-ship of the Shell Aviation Corp., arrived in Houston the afternoon of Jan. 29, carrying F. A. Jones, secretary of the Shell Aviation Corp., and Milton Girten, pilot. The trip was made from St. Louis, via Tulsa and Dallas, the plane carrying on the early stages of the flight Dr. W. von Holst Pellekaan, vice president of the Shell in charge of all geological work in America. At Houston, President U. de B. Daly and George S. Rollin, vice president in charge of production, were taken aboard for a trip Wednesday to San Antonio. The plane schedule called for a flight over west Texas the remainder of the week, stops being made at Midland, Texas, and Carlsbad, New Mexico, before returning to St. Louis via Ardmore, Okla., and other Mid-Continent points.

Equipment of the "Gold Shell" has been designed to meet the most exacting requirements of air transportation. It is equipped with three Wasp motors of 400 horsepower each; has a wing spread of 71 feet six inches, and a height of 12 feet eight inches. It is capable of maximum speed of 150 miles an hour at sea level and cruising speed of 125 miles an hour. Special attention was given construction and equipment of the ship's cabin, which is 16 feet long and five feet high, affording unusual degree of comfort for passengers. The cabin has six deep arm chairs, upholstered in Brewster broadcloth, a comfortable lounge, a table, running water, a lavatory and refrigerator. A baggage compartment is provided at the rear.

Rockefeller Claims Indiana Victory

CLEVELAND, Feb. 11.—Claim was made last week by the John D. Rockefeller, Jr., faction in the Standard Oil Co. of Indiana controversy, that it had proxies for 51 per cent of the more than 9,000,000 shares of capital stock that may vote at the Indiana company's annual election March 7 at Whiting, Ind.

A New York representative of Col. Robert W. Stewart, chairman of the Indiana company whom Mr. Rockefeller seeks to unseat, replied that the Rockefeller group was not in position to know how many votes it had.

Proxy for 44,000 shares has been given Col. Stewart, it was announced at Chicago, by the Sun Life Insurance Co. of Montreal and one for 12,000 shares by John Eagles of Los Angeles.

That a legal fight may develop at the Whiting meeting is indicated by the retention of Charles Evans Hughes and special counsel in Indiana by the Rockefeller faction.

CHICAGO, Feb. 9.—Mr. Henry H. Cross, president of the Henry H. Cross Co., accompanied by Mrs. Cross, left Jan. 21 for a several months stay in Los Angeles. Mrs. N. D. Small is acting manager of the Cross organization during Mr. Cross' absence.

CHICAGO, Feb. 9.—Mr. W. D. Cross Jr., ex-president of the Indiana Independent Petroleum Marketers Association, has disposed of his controlling interest in the stock of the Eastern Indiana Oil & Supply Co., Geneva, Ind. Mr. Cross will make his future home in Los Angeles, where he intends to enter the lubricating oil business.

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Throttle Valves
Tank Car Couplings
Union Wrench Couplings

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Sall Bros. Co.
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This New Pump Boosts Bulk Sales

Turn your "drive in" buyers into bulk customers. You can do it easily, just like dozens of other companies, with this

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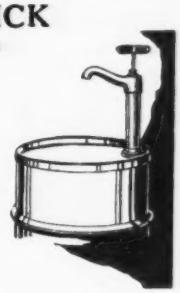
Home Oil Pump



Your occasional customers will become "regulars," buying in 50 gallons instead of 5. Pump handles oil, gas, etc. with equal ease. Fits any drum or barrel for the individual user. Fool proof and wear proof—made of finest brass, steel and cast iron.

Distribute these pumps with bulk sales and increase your gallonage as many others are doing. Write for circular and special quantity prices.

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VIKING PUMP CO.
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Viking Pump Co., Dept. B.
Please send details about your Kwart Kwick Pump.
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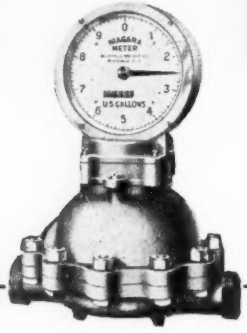
Regardless of how much or how little gasoline or oil passes through a Niagara meter, it accurately registers and records, preventing loss, theft or favoritism.

And a Niagara repays its cost by enabling you to sell and profit on the gasoline and oil that would be unaccounted for without a meter! Send today for our newest catalogue.



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Third—Blend to tested specifications by experienced specialists of this 50 year old organization, producing a line of Freedom Motor Oils which places your business above competition, pleases your dealers, and helps them to hold their customers.

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100% Pennsylvania Motor Oils, *blended to your own Specifications*, from Freedom 450 Bright Stock and Freedom 100% Pennsylvania Crude Neutrals.

Freedom Quality Stocks
600 Steam Refined
635 Steam Refined
650 Steam Refined

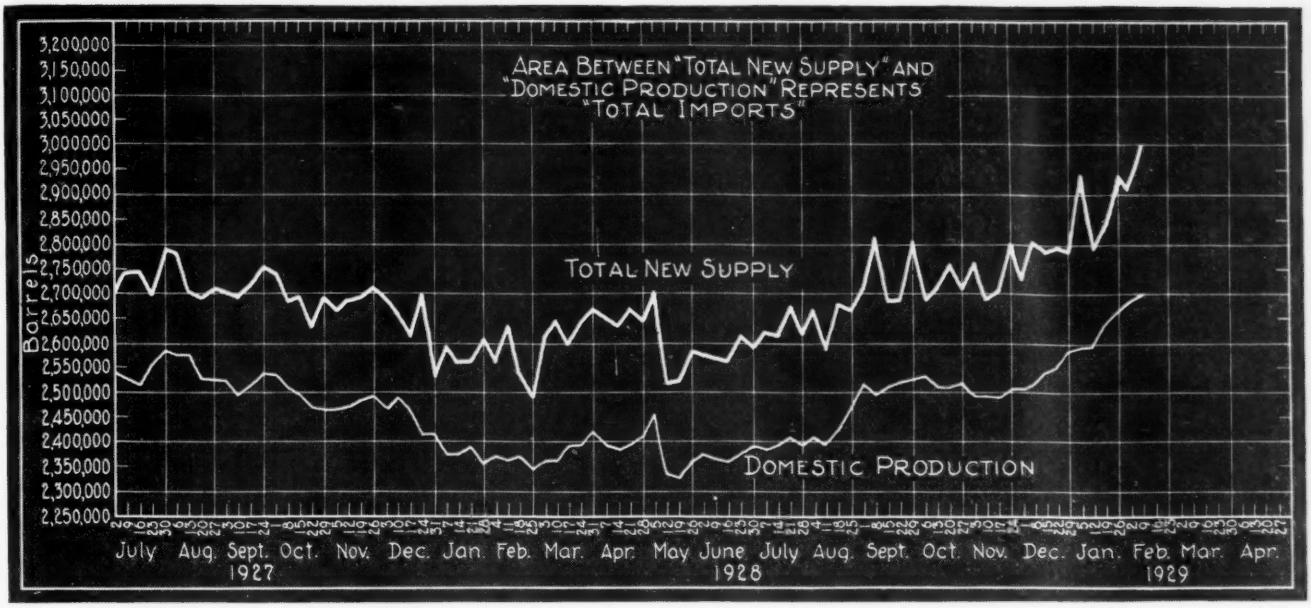
Freedom 300 Mineral Seal Oil made to Railroad Specifications.

Freedom Filtered Burning Oils.

The Freedom Oil Works Company
Freedom, Penna.
Established 1879
Refineries at Freedom and Coraopolis, Pennsylvania

FREEDOM

Daily Average Crude Oil Production and Imports



Daily average gross output of United States, by fields, for week ending with dates below as compiled by American Petroleum Institute

PRODUCTION SUMMARY

	Feb. 9	Feb. 2
Production east of Rockies	1,903,650	1,901,950
Increase		1,700
Total production in U. S.	2,693,550	2,680,050
Increase		13,500
Crue oil imports	322,429	229,000
Increase		93,429
Total crude supply	3,015,979	2,909,050
Increase		106,929

OKLAHOMA	Feb. 9	Feb. 2
Braman	3,700	3,700
Logan County	14,100	14,250
Blackwell	4,250	4,150
Hubbard	1,900	1,900
Thomas	950	950
Tonkawa	10,950	10,950
Garber	6,150	6,300
Burbank	22,950	23,000
Osage (outside Burbank)	26,050	26,100
Cushing	20,600	20,650
Yale-Jennings	7,700	7,700
Davenport	1,650	1,650
Bristow-Slick	19,000	19,000
North Okmulgee	14,200	14,200
South Okmulgee (incl. Lyons-Deaner)	7,950	8,000
Cromwell	8,100	8,100
Papoose	3,500	3,500
Wewoka	5,350	5,350
Seminole	39,600	39,600
Searight	9,100	9,200
Earlsboro	65,650	66,200
Bowlegs	41,100	42,400
Little River	101,600	101,900
St. Louis	127,150	129,850
Duncan District	7,250	7,300
Graham	4,500	4,500
Fox	1,500	1,500
Healdton	13,100	13,200
Hewitt	8,700	8,700
Scholem-Alechem	13,550	13,750
Pearson	1,750	1,600
Allen Dome	28,950	29,500
Maud	40,100	34,950
Oklahoma City	5,600	5,650
Mission	700	750
Others	39,400	38,700
Total, Oklahoma	728,350	728,700
Decrease		350

KANSAS		
Greenwood County	22,500	22,750
Florence-Covert	900	900
Peabody-Elbing	3,250	3,250
Eldorado-Towanda	12,300	12,300
Augusta-Fox-Bush	2,950	2,950
Rainbow Bend	1,100	1,100
Russell	3,450	3,400
Churchill	7,300	7,400
Oxford	6,150	6,350
Sedgwick Co.	6,000	6,700
Others	29,800	29,700
Total, Kansas	95,700	96,800
Decrease		1,100

NORTH LOUISIANA		
Homer	4,000	4,050
Haynesville	5,550	5,500
Caddo, light	9,000	8,800
Caddo, heavy	2,700	2,750
De Soto, Red River	3,950	4,000
Elm Grove	600	600
Bellevue	700	750
Cotton Valley	3,100	3,250
Urania	5,400	5,550
Pleasant Hill	450	500
Others	250	200
Total, North Louisiana	35,700	35,950
Decrease		250

ARKANSAS		
El Dorado	4,850	4,850
Champagnolle	10,450	10,650
Smackover, light	6,750	6,900
Smackover, heavy	51,300	51,050
Stephens	1,000	1,000
Neveda	1,300	1,350
Lisbon	1,500	1,500
Others	100	100
Total, Arkansas	77,250	77,400
Decrease		150

TEXAS (Outside Gulf Coast)		
Panhandle District		
Hutchinson County	26,050	27,100
Carson County	5,900	6,000
Gray County	21,900	23,300
Wheeler County	700	700
Others	2,300	2,500
Total, Panhandle District	56,850	59,600
Decrease		2,750
North Texas		
Burkburnett	9,300	9,300
Electra	13,300	13,450
Iowa Park and K-M-A	6,300	6,000
Wilbarger	27,550	28,450
Archer county	17,600	17,700
Montague-Cooke	9,650	9,700
Others	500	500
Total, North Texas	84,200	85,100
Decrease		900
West Central Texas		
Stephens County	6,450	6,500
Eastland-Desdemona	6,950	6,700
Brown County	9,200	9,250
Coleman County	3,550	3,250
Callahan County	3,600	3,500
Shackelford County	11,600	11,650
Young County	7,600	7,700
Throckmorton County	700	700
Palo Pinto County	400	400
Jack County	1,700	1,700
Others	700	700
Total, West Central Texas	52,450	52,050
Increase		400
West Texas		
Jones County	7,050	7,000
Mitchell and Scurry Counties	2,600	2,400
Howard County	39,250	41,160
Reagan County	18,800	19,000
Crane and Upton Counties	52,400	51,000
Crockett County	2,050	2,400
Pecos County	82,700	74,200
Winkler County	170,050	177,300
Others	1,750	1,600
Total, West Texas	376,650	376,050
Increase		600
East Central Texas		
Mexia	5,900	5,950
Currie	500	500
Richland	500	500
Wortham	1,400	1,400
Corsicana-Powell	9,100	9,100
Boggy Creek	3,050	2,750
Nigger Creek	600	600
Total, East Central Texas	21,050	20,800
Increase		250
Southwest Texas		
Luling	13,000	13,100
Lytton Springs	1,000	1,000
Somerset	600	600
Laredo District	12,000	12,000
Dale	700	700
Salt Flat	19,050	17,550
Others	3,000	2,550
Total, Southwest Texas	49,350	47,500
Increase		1,850
Total, Texas (outside Gulf Coast)	640,550	641,100
Decrease		550

GULF COAST		
Coastal Texas		
West Columbia	7,100	7,100
Damon Mound	950	950
Big Creek	5,250	5,000
Boling	2,100	2,300
Blue Ridge	4,300	4,350
Pierce Junction	11,800	11,950
Humble	4,700	4,800
Goose Creek	6,300	6,300
South Liberty	6,750	7,250
Hull	10,100	9,850
Saratoga	950	1,000
Batson	1,400	1,350
Barber's Hill	6,500	3,250
Sour Lake	2,950	2,900
Spindletop	33,900	32,950
Racoon Bend	1,850	2,000
Orange County	3,100	3,100
Sugarland	7,500	7,600
Others	4,500	5,000
Total, Coastal Texas	122,000	119,000
Increase		3,000
Vinton	4,200	4,200
Sulfur Dome	2,500	2,500
Lockport	5,000	3,700
Sweet Lake	600	500
Coastal Louisiana		
Evangeline	800	800
East Hackberry	5,750	5,800
Edgerly	800	850
Sorrento Dome	800	800
Others	1,050	1,400
Total, Coastal Louisiana	21,500	20,550
Increase		950
Total, Gulf Coast	143,500	139,550
Increase		3,950

ROCKY MOUNTAIN		
Wyoming		
Salt Creek	33,300	32,150
Grass Creek	2,250	2,300
Elk Basin	750	600
Big Muddy	2,300	2,250
Lost Soldier	3,400	3,350
Rock Creek	2,400	2,450
Lance Creek	300	300
Oregon Basin	3,350	2,900
Others	5,650	5,700
Total, Wyoming	53,700	52,000
Increase		1,700
Montana		
Cat Creek	1,400	1,450
Sunburst	6,750	6,750
Pondera	2,700	2,700
Total, Montana	10,850	10,900
Decrease		50
Colorado		
Moffat (Craig)	1,050	900
Fort Collins	2,300	2,800
Florence	1,100	1,100
Others	2,050	2,100
Total, Colorado	6,500	6,900
Decrease		400
New Mexico		
Hogback	450	500
Artesia	950	1,000
Rattlesnake	450	450
Others	100	100
Total, New Mexico	1,950	2,050
Decrease		100
Total, Rocky Mountain	72,950	71,850
Increase		1,100

CALIFORNIA		
Santa Fe Springs	185,500	175,000
Long Beach	178,000	178,000
Huntington Beach	49,000	49,000
Torrance	15,000	15,000
Dominguez	10,000	10,000
Rosencranz	6,500	6,500
Inglewood	27,000	27,000
Midway-Sunset	73,000	73,000
Ventura Avenue	55,000	57,000
Elwood-Goleta	23,000	20,000
Seal Beach	31,500	31,500
Kettleman Hills	4,600	3,800
Others	131,800	132,300
Total, California	789,900	778,100
Increase		11,800
EASTERN		
(Including Ill., Ind., Ky., Ohio, W. Va., Pa., and N. Y.)	109,600	110,600
Decrease		1,000

Compilation Of Mid-Continent Refinery Operations

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National Petroleum News

Mid-Continent Refinery Operations Week Ended February 8 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	West Texas	North La.-Ark.	Total Week Ended Feb. 8
Plants Reporting	12	29	24	12	12	89
Da. Av. Cap. (bbls.)	92,000	160,200	85,100	70,500	54,900	462,700
Da. Cracking Capacity	30,700	52,600	17,200	.....	22,700	123,200
Da. Av. Crude Runs	56,835 — 0.8	92,504 — 6.7	56,756 + 2.6	43,315 + 5.1	57,115 + 4.7	306,525 — 0.3
Da. Av. Other Oils	9,701 + 11.8	4,270 — 52.9	3,079 + 5.9	526 +640.8	3,022 — 11.0	20,598 — 14.6
GASOLINE—Gallons						
Stocks, Feb. 1	23,214,000	55,586,000	20,325,000	5,730,000	8,410,000	113,265,000
Prod. 2-1 to 2-8	9,602,000 + 1.4	15,443,000 — 9.4	7,138,000 + 11.3	3,111,000 — 1.6	5,516,000 + 3.8	40,810,000 — 1.4
Ship. 2-1 to 2-8	8,607,000 + 18.0	11,316,000 — 5.1	6,328,000 — 4.5	3,768,000 + 4.0	5,287,000 — 12.9	35,306,000 — 0.7
Stocks, Feb. 8	24,209,000 + 4.3	59,713,000 + 7.4	21,135,000 + 4.0	5,073,000 — 11.5	8,639,000 + 2.7	118,769,000 + 4.9
Ratio Sales to Prod.	89.6%	73.3%	88.7%	121.1%	95.8%	86.5%
KEROSENE—Gallons						
Stocks, Feb. 1	4,314,000	7,603,000	1,682,000	66,000	356,000	14,021,000
Prod. 2-1 to 2-8	1,804,000 + 1.0	1,635,000 — 15.8	1,551,000 + 9.8	..... —100.0	373,000 + 10.7	5,363,000 — 2.2
Ship. 2-1 to 2-8	1,866,000 — 4.6	1,835,000 — 5.5	1,433,000 — 2.0	10,000 + 11.1	424,000 — 2.5	5,568,000 — 4.0
Stocks, Feb. 8	4,252,000 — 1.4	7,403,000 — 2.6	1,800,000 + 7.0	56,000 — 15.2	305,000 — 14.3	13,816,000 — 1.5
Ratio Sales to Prod.	103.4%	112.2%	92.4%	.....	113.7%	130.8%
STOVE DISTILLATE—Gallons						
Stocks, Feb. 1	1,423,000	1,662,000	312,000	23,000	51,000	3,471,000
Prod. 2-1 to 2-8	369,000 +125.0	1,165,000 — 11.3	187,000 + 19.1	79,000 + 79.5	79,000 — 33.1	1,879,000 + 4.7
Ship. 2-1 to 2-8	680,000 + 50.1	973,000 — 27.9	213,000 + 6.0	23,000 — 51.1	51,000 — 48.5	1,940,000 — 9.8
Stocks, Feb. 8	1,112,000 — 21.9	1,854,000 + 11.6	286,000 — 8.3	79,000 +243.5	79,000 + 54.9	3,410,000 — 1.8
Ratio Sales to Prod.	184.3%	83.5%	113.9%	29.1%	64.6%	103.2%
GAS OIL—Gallons						
Stocks, Feb. 1	4,312,000	19,590,000	3,482,000	13,128,000	3,840,000	44,352,000
Prod. 2-1 to 2-8	1,976,000 + 21.5	568,000 — 72.9	686,000 — 56.5	699,000 — 48.2	1,816,000 — 6.6	5,745,000 — 33.2
Ship. 2-1 to 2-8	2,271,000 + 62.3	1,578,000 — 46.8	540,000 — 59.6	936,000 + 74.3	983,000 — 61.1	6,308,000 — 28.0
Stocks, Feb. 8	4,017,000 — 6.8	18,580,000 — 5.2	3,628,000 + 4.2	12,891,000 — 1.8	4,673,000 + 21.7	43,789,000 — 1.3
Ratio Sales to Prod.	114.9%	277.8%	78.7%	133.9%	54.1%	109.8%
FUEL OIL—Gallons						
Stocks, Feb. 1	14,517,000	42,366,000	36,157,000	38,455,000	22,025,000	153,520,000
Prod. 2-1 to 2-8	5,666,000 + 0.04	5,237,000 — 4.0	6,976,000 + 18.1	8,351,000 + 16.2	9,397,000 + 5.9	35,627,000 + 7.7
Ship. 2-1 to 2-8	6,990,000 + 1.1	7,742,000 + 12.7	5,119,000 — 41.4	8,473,000 + 34.2	10,089,000 + 29.4	38,413,000 + 4.9
Stocks, Feb. 8	13,193,000 — 9.1	39,861,000 — 5.9	38,014,000 + 5.1	38,333,000 — 0.3	21,333,000 — 3.1	150,734,000 — 1.8
Ratio Sales to Prod.	123.4%	147.8%	73.4%	101.5%	107.4%	107.8%

Gasoline Produced by Various Methods, Week Ended February 8

	Kansas	% of Total	Oklahoma	% of Total	North & Cent. Texas	% of Total	West Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	6,014,000	62.6	9,821,000	63.6	5,188,000	72.7	3,063,000	98.5	2,473,000	44.8	26,559,000	65.1
Cracked	3,024,000	31.5	4,996,000	32.4	1,557,000	21.8	.....	0.0	2,466,000	44.7	12,043,000	29.5
Natural	564,000	5.9	626,000	4.0	393,000	5.5	48,000	1.5	577,000	10.5	2,208,000	5.4
Total	9,602,000		15,443,000		7,138,000		3,111,000		5,516,000		40,810,000	

+ or — columns are % change over previous week.

Mid-Continent Gasoline Stocks Up 5,500,000 Gallons

Staff Special—By Telegraph
TULSA, Feb. 11

CRUDE runs and gasoline production and shipments at 89 Mid-Continent refineries reporting weekly operations to this publication showed little change during week ended Feb. 8, as compared with last week in January. Crude runs were reduced 1000 barrels daily average; gasoline production was reduced 500,000 gallons and shipments dropped off 233,000 gallons.

Crude runs averaged 306,525 barrels daily for the week. Kansas refiners reduced runs 0.8 per cent while Oklahoma refiners cut their runs 6.7 per cent. North Texas refiners increased runs 2.6 per cent and West Texas plants increased 5.1 per cent. Louisiana-Arkansas refiners boosted runs 4.7 per cent.

West Texas refiners continued their

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended Feb. 8. Change in stocks figured from Jan. 11.

	Gallons
GASOLINE	
Production	165,134,000
Shipments	139,298,000
Net change in stocks	+25,836,000
Ratio sales to production	84.4%
KEROSENE	
Production	22,607,000
Shipments	25,107,000
Net change in stocks	—2,500,000
Ratio sales to production	111.1%
STOVE DISTILLATE	
Production	7,139,000
Shipments	7,819,000
Net change in stocks	—680,000
Ratio sales to production	109.5%
GAS OIL	
Production	27,288,000
Shipments	28,079,000
Net change in stocks	—791,000
Ratio sales to production	102.9%
FUEL OIL	
Production	138,140,000
Shipments	152,791,000
Net change in stocks	—14,651,000
Ratio sales to production	110.6%

policy of shipping gasoline as fast as produced. That district was the only one which drew any gasoline from storage.

Gasoline stocks increased 5,500,000 gallons for the field as a whole. Kansas refiners increased stocks 1,000,000 gallons, Oklahoma refiners 4,200,000 gallons and North Texas refiners 900,000 gallons. West Texas refiners reduced stocks 600,000 gallons and Arkansas-Louisiana increased stocks 200,000 gallons. Total stocks on hand at close of week was 118,769,000 gallons.

At current rate of shipments of 35,306,000 gallons a week, stocks on hand represent 22.5 days' supply. On Feb. 10, 1928, 79 Mid-Continent refineries, the West Texas Group not being included in the report at that time, had 84,586,000 gallons in storage. Shipments for the week were 33,739,000 gallons and stocks accordingly represented at current rate of shipment 17.5 days' supply.

Kerosene production was virtually unchanged while shipments were slightly lower but stocks were reduced 200,000 gallons to 13,816,000 gallons. A year ago virtually the same group of plants had in storage 13,048,000 gallons.

Stove distillate production was 1,879,000 gallons an increase of 4.7 per cent over the previous week. Shipments were 1,940,000 gallons a drop of 9.8 per cent. Stocks were reduced however by 1.8 per cent. Kansas and North Texas refiners were the only ones to draw on stocks.

Gas oil production was increased in Kansas but reduced considerably in other districts the total reduction for the field amounting to almost three million gallons. Shipments meanwhile dropped 2,500,000 gallons. Stocks were reduced 600,000 gallons.

Fuel oil production was increased 2,500,000 gallons with shipments up 1,800,000 gallons. Stocks were reduced 2,800,000 gallons. Reductions were reported in each district except North Texas.

NEW YORK, Feb. 9.—J. T. Donaldson, formerly in charge of tank car gasoline sales in New Jersey for the Tidewater Oil Co., has joined the F. W. Robinson Oil Co., petroleum products brokerage firm with offices at 39 Broadway, New York City.

NEW YORK, Feb. 9.—R. E. Hood, formerly manager of the New York office of the Marland Oil Co. has recently become affiliated with the Oil Trading Co., located at 225 Broadway, New York City. Oil Trading Co. does a general oil brokerage business, specializing in domestic and export cargo shipments.

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NAPHTHA — GAS — OILS
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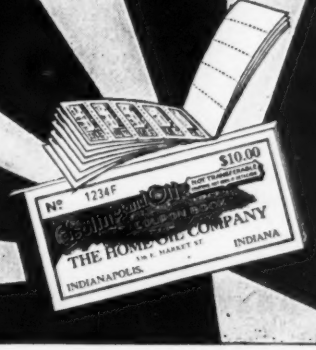
ALLISON COUPON COMPANY
INDIANAPOLIS, INDIANA



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It produces a carburetted mixture that fires readily on the first turning over of the engine. It insures complete combustion in a cold running engine and maintains power output of the engine after it has warmed up. It reduces the use of the choke, eliminates engine balk and gas locks, preventing jerky operation. It decreases the dilution of your motor oil.

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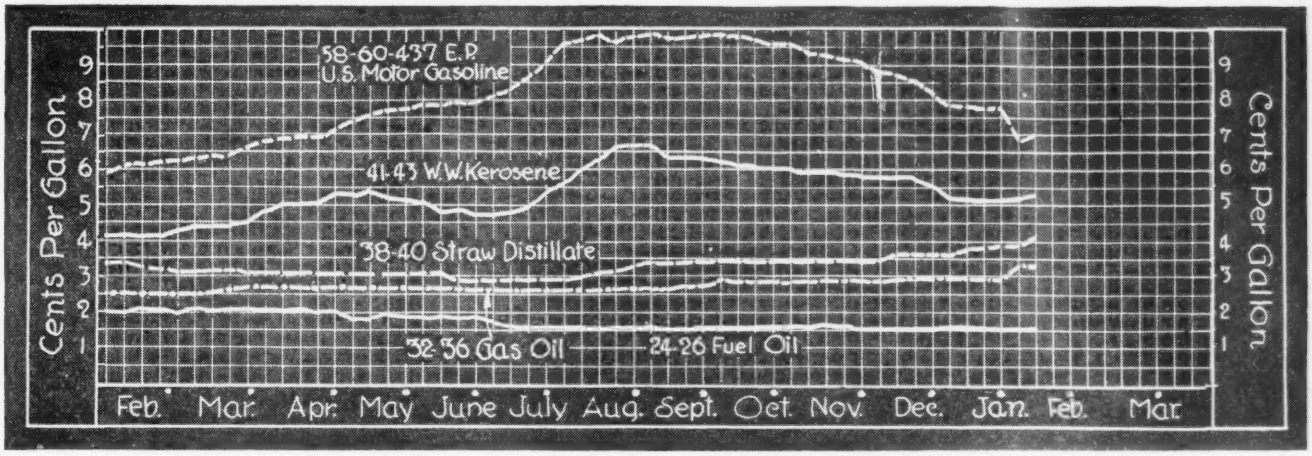
Refinery - Tank Wagon Markets

National Petroleum News

Current Prices of Principal Mid-Continent Refined Products


58-60-437 E.P. U.S. Motor Gasoline
41-43 W.W. Kerosene
38-40 Straw Distillate
32-36 Gas Oil
24-26 Fuel Oil
Cents Per Gallon
Cents Per Gallon
9 8 7 6 5 4 3 2 1
Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.

Prices shown are on Group 3 basis and extended to date shown in Refinery Market Tables Section of this issue

Mid-Continent Fuel and Furnace Oils Advance Under Active Demand

Staff Special
TULSA, Feb. 9

WITH most of the Middle West blanketed with snow and ice since the first of the month, heating oils furnished the major amount of activity in the Mid-Continent refinery market the first week of February. Prices on all grades of heating oils advanced from 0.125 to 0.375-cent a gallon.

All grades of gasoline were slow, an expected result of the unfavorable weather. Prices were generally steady in Kansas and Oklahoma, but lost some ground in Texas.

Natural gasolines developed renewed activity late in the week, but prices had reacted only slightly prior to close of business, Feb. 9.

Kerosenes were quiet for spot shipment, but jobbers made several inquiries for deferred shipment. Neutral oils were quiet. Bright stock was in fair demand. Wax prices dropped under 4 cents a pound.

Distillates, Gas Oil, Fuel Oil

Buyers during the week just closed combed the Mid-Continent for stove distillates for spot shipment. The cold weather throughout the country jumped consumption of all heating oils tremendously and many jobbers had some difficulty replacing their stocks as rapidly as customers drew on them.

Refiners who early in the season contracted for their estimated production for the year report that in several instances jobbers already have ordered out all their allotment and others have been taking out the maximum specified in the contracts each week.

Distillate of 38-40 gravity with a flash of 200 degrees F. or over brought 4 cents a gallon before the close of the week, while lower flash goods moved at 4.125 cents. Many buyers were forced to fall back on gas oils due to the scarcity of any grade of distillate.

For the past two weeks or more refiners in much of the Mid-Continent have been increasing their cracking operations and the amount of gas oil available for sale on the spot market has been reduced. This situation caused a comparatively active market for gas oils in all areas and prices during the week moved up 0.125 to 0.25 cent a gallon. The zero cold test gas oil was almost unobtainable for spot shipment, while 32-36 gravity oil U.G.I. specifications was scarce at 3 cents a gallon.

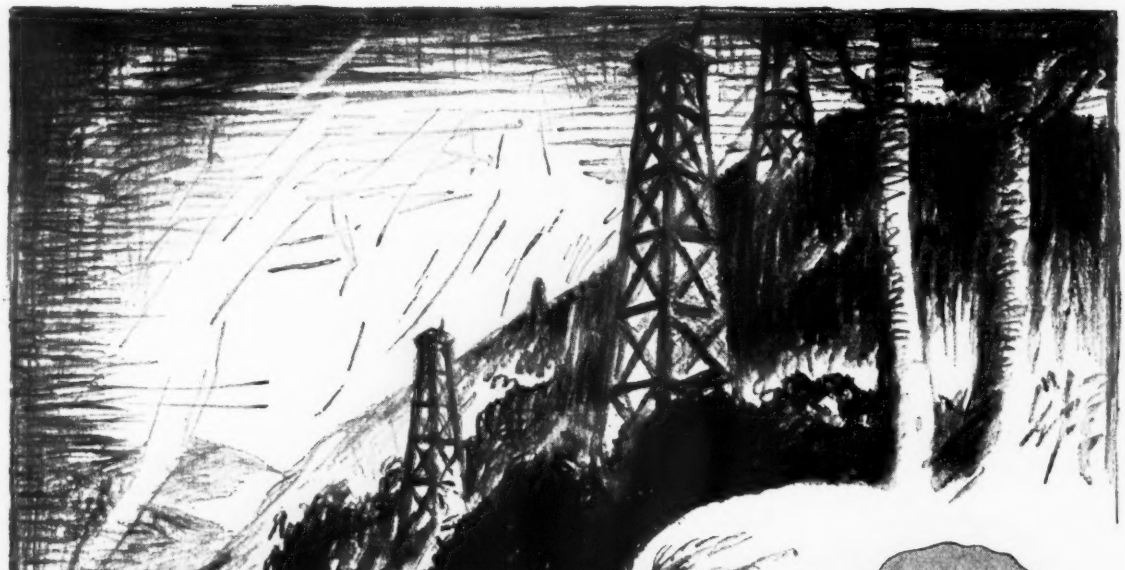
There has been only a small amount of high gravity, low cold test fuel oil made in Oklahoma this season. Most of the production has been sold on contract. What little there was available for the spot market was made by blending with gas oil. The scarcity of gas oils accordingly caused an even greater scarcity of the fuel oil. In Kansas one large refiner has made a large quantity of this grade of fuel, but reports this week indicated he now was so far oversold that buyers had difficulty getting shipments and he had virtually withdrawn from the spot market.

Local demand for fuel oil in north Texas caused prices to advance fractionally. The oil was bought both by railroads and by refiners operating cracking units.

Gasolines

Exporters showed virtually no interest in the market during the week. A majority of north Texas refiners, however, had sufficient orders on their books to keep them out of the domestic market for another two to four weeks.

Jobbers continued to buy on a hand to mouth basis and instructions were slow because of the unfavorable weather throughout the Middle West. Kansas refiners reported spot gasoline demand was extremely light. Oklahoma refiners also experienced only



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a moderately fair volume of business. Prices in the two districts were unchanged, Oklahoma refiners selling 58-60 U. S. Motor at prices ranging from 6.50 to 7 cents, the majority however moving their goods at 7 cents. One sale of 100 cars of U. S. Motor for shipment over February and March at 6.25 cents a gallon was reported late in the week.

Arkansas and Louisiana refiners made no change in their prices for 58-60 U. S. Motor. The prevailing quotation for differential territory shipment Feb. 9 was 7.25 cents a gallon.

West Texas refiners quoted 58-60, 437 e.p. gasoline during the week at prices ranging from 6.125 to 6.50 cents a gallon, f.o.b. refinery, and around 6.25 cents a gallon, f.o.b. Group 3.

Natural Gasolines

Two large buyers late in the week sent inquiries into the Oklahoma and Texas fields. This had the effect of checking prices which had been slipping slowly since the first of the month. Just prior to close of business Feb. 9 two companies were offering 6.75 and 6.875 cents for grade AA, and another buyer was seeking grades BB and C at 5 to 5.25 cents a gallon.

One buyer has been a consistent seeker for grade A and has kept all the available production bought up for the past several weeks. His buying prices were from 0.50 to 0.75 cent above the going price for grade AA. He reports he can afford to pay a better price because of the purpose to which he puts the goods. He reported recently that if he used grade AA for that purpose the evaporation loss would amount to more than the difference he pays.

Kerosenes

While farmers have been kept out of their fields because of the cold weather and consequently have had little occasion to use kerosene, jobbers have been making plans to take care of the increased demand which will come with the first real break in the weather. The jobbers accordingly sent out inquiries for kerosenes for deferred shipment, and a few who have available storage have been slowly building up their stocks to meet the spring demand. Buying has been sufficiently good in all fields to prevent any noticeable increase in stocks. Prices showed virtually no changes during the week.

Wax

Inquiries for 124-126 white crude scale wax were scarce. A majority of Oklahoma refiners preferred to store their wax rather than accept the offers made them. One refiner on Feb. 6, however, sold 100 tons of wax at 3.75 cents.

Chicago Resale Market

Zero Fuels in Active Demand

Staff Special

CHICAGO, Feb. 9

AN ACTIVE demand for all grades of zero oils, suitable for use in domestic burners, featured the week in the Chicago resale market. Cold, stormy weather over the surrounding territory kept demand for these oils at a high level, most sellers reported. Distributors of burner oils continued to report an exceptionally heavy demand.

More refiners were added to the list of those "out of the market" and marketers and jobbers found it increasingly difficult to obtain good grades of furnace oils for even reasonably prompt shipment. A number of carlot marketers reported they were entirely out of the market on 38-40 straw distillate, under 200 flash, and on 28-30 zero fuel oil. Others said they were able to supply only their regular trade and were not accepting any new business for prompt shipment. Most refiners reported that jobbers were taking out the maximum amounts allowed on their contracts.

Most of the Chicago trade were expecting an even tighter market on burner oils, as the major portion of the territory is still covered with snow and the weather report for next week offers no apparent relief so that refiners could catch up on shipments. The Chicago weather bureau forecasts continued cold weather with frequent snows in the northern portions of the Standard of Indiana territory while the weather in the southern portions will be near the seasonal normal with only light precipitation.

Prices of distillate, gas and high gravity, low cold test fuel oils continued to climb. The low flash 38-40 light straw distillate was approximately 0.25 cent higher by Feb. 9. The majority of sellers quoted 3.875 to 4 cents during the early days of the week, but by Feb. 8 practically no goods was available under 4 cents and most of the trade quoted 4.125 cents on Feb. 9. A few sales were reported at 4.25 cents.

Gas oils were up approximately 0.125 cent over the week. Most sellers reported 32-36 ordinary dark gas oil was also harder to obtain and it moved at 2.875 to 3 cents on Feb. 9 as against a price of 2.75 to 2.875 cents previously. Most sales of 32-36 dark zero gas oil were at 3 to 3.25 cents until Feb. 9 when this fuel moved at 3.125 to 3.25 cents. One or two sellers, however, continued to offer this grade at 3 cents but on the other hand sales were reported at 3.375 cents. The 32-36 straw zero grade moved mostly at 3.25 to 3.375 cents Feb. 8 and at 3.125 to 3.375 cents previously.

Fuel oil prices were generally unchanged, except 28-30 zero grade, which was higher. Sales of 28-30 zero were reported at $1 to $1.05 as the week opened but by Feb. 7 so few sales were reported, that the market was nominal at $1.025 to $1.10 and closed Feb. 9 with most sellers quoting nominally at $1.05 to $1.15. Quotations were heard up to $1.20.

Jobbers were, in the main, still following their policy of buying gasoline only for immediate requirements and as road conditions are bad in most sections, this resulted in another week of light demand in the Chicago market. One or two sellers, however, reported their business was somewhat improved over last week.

Gasoline prices held generally steady most of the week but were off 0.125 cent during the closing days. The major Oklahoma refiners continued to hold their U. S. Motor price at 7 cents while the smaller refiners and the majority of the marketers moved goods at 6.75 cents and up. Other marketers sold Oklahoma U. S. Motor at 6.625 cents on Feb. 7 and 8. Several marketers reported ability to buy Oklahoma U. S. Motor for resale at 6.375 cents but the majority of quotations were 6.50 and 6.625 cents. Sales of west Texas doctor and corrosion test Motor gasoline were reported mostly at 6.375 to 6.625 cents, Group 3 basis.

The 60-62, 437 e. p. gasoline moved mostly at 7 to 7.25 cents until Feb. 9 and closed at 6.875 to 7.25 cents. Gasoline of 60-62, 400 e. p. moved at 7.375 to 7.50 cents prior to Feb. 7 and at 7.25 to 7.50 cents thereafter. The 64-66, 375 e. p. grade closed Feb. 9 at 7.75 to 8 cents and moved at 7.875 to 8 cents prior to this.

Kerosene sales increased in several quarters, while nearly all sellers reported an increasing number of inquiries from jobbers this week. Prices were steady and although generally unchanged, the general tone of the market was better. Most sales of 41-43 w. w. kerosene were at 5.125 to 5.25 cents throughout the week. A few sellers advanced quotations to 5.375 cents.

Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery, except where $ is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

Weighted Average Prices

OKLAHOMA (Weighted Average Prices)

	Prices Feb. 11	Prices Feb. 4	Prices Jan. 28
58-60 U.S. Motor, 437 e.p.	7.0000	6.9942	7.7847
60-62 437 e.p. gasoline...	7.3750	7.2935	7.5673
60-62 400 e.p. gasoline...	7.5000	7.5000	8.2500
64-66 375 e.p. gasoline...	8.0833	No sales reported	8.5000

All above weighted average prices are effective on Monday on the dates shown at the top of the columns.

Sub-normal weather over much of the country the past several days has had its effect on gasoline demand. Jobbers have bought sparingly as a result of slower consumption and the volume of goods moved on the spot market has been comparatively light.

The prevailing quotation for 58-60 U. S. Motor in Oklahoma was 7 cents a gallon, with a few reporting refiners selling at 6.75 to 7 cents, and one or two others accepting occasional business at 6.50 cents. The volume of goods moving from non-reporting refiners at prices ranging from 6.50 cents up was small as compared with the reported sales at the same price range and probably would have made little if any difference in the above weighted averages. The bulk of sales throughout the week were at the 7 cent level.

KANSAS (Weighted Average Price)

	Prices Feb. 11	Prices Feb. 4	Prices Jan. 28
58-60 U.S. Motor 437 e.p.	7.1806	7.2885	7.9083

Kansas refiners received reports throughout the week of snow and ice blocked roads throughout much of the state and their gasoline business naturally was small. Their prices for the most part were unchanged throughout the week.

(The Oklahoma weighted average prices above are made up from confidential daily reports on all gasoline spot market sales—for shipment in 10 days—from Oklahoma refineries representing 82.6 per cent of the state's refining capacity. The Kansas weighted average prices above are made up from confidential daily reports of all gasoline spot market sales from Kansas refineries representing 58 per cent of the state's operating capacity. The above prices do not include prices on sales for "over the month," for contracts, or to brokers or on shipments to company owned stations. Records of the reporting refiners are checked periodically to verify the accuracy of their reports.—Editor)

OKLAHOMA	Prices Feb. 11	Prices Feb. 4	Prices Jan. 28
48-50 450 e.p. naphtha...	†6.50 – 6.75	†6.50 – 6.75	†7.25 – 7.50
50-52 450 e.p. naphtha...	†6.50 – 6.75	†6.50 – 6.75	†7.25 – 7.50
56-58 450 e.p. gasoline...	6.625– 6.875	6.625– 6.875	7.375– 7.625
58-60 450 e.p. gasoline...	6.875– 7.00	6.875– 7.00	7.50 – 7.75
64-66 390 e.p. gasoline...	7.75	7.75	8.50 – 9.00
68-70 350-360 e.p. gasoline	8.50	8.50 – 8.75	9.25 – 9.75
PENNSYLVANIA			
52-54 Naphtha.....	8.25 –10.00	8.25 – 9.25	8.50 –10.00
54-56 Naphtha.....	8.25 –10.00	8.25 – 9.25	8.50 –10.00
58-60 U.S. Motor 437 e.p.	9.25 – 9.75	9.25 –10.00	9.25 –10.25
60-62 400-410 e.p. gasoline	9.75 –10.00	9.75 –10.50	9.75 –10.75
64-66 390 e.p. gasoline...	10.25 –11.00	10.25 –11.00	10.50 –11.50
68-70 Str-run gas. 350-360 e.p.....	11.00 –12.00	11.00 –12.50	11.50 –12.50
OHIO (Quotations of S. O. Ohio)			
‡Winter Specification Motor Gasoline, Cleveland & Toledo switching district	.....	10.50	10.75
In Ohio where freight does not exceed 1.29c per gal.	‡‡‡10.00	‡‡10.75	11.00
KANSAS (F. O. B. refinery Kansas destination)			
60-62 400 e.p. gasoline....	7.50	8.00	9.00
64-66 375 e.p. gasoline....	8.25	8.50	9.50

‡3c state tax to be added. ‡‡Where freight exceeds 1.29c, price is 10.75c plus difference between 1.29c and freight. ‡‡‡This is for delivery any point in Ohio.

NORTH TEXAS	Prices Feb. 11	Prices Feb. 4	Prices Jan. 28
48-52 450 e.p. naphtha...	†6.375	†6.50	†7.00
56-58 450 e.p. gasoline...	†6.375	†6.50	†7.00
58-60 450 e.p. gasoline...	†6.375		†7.00
58-60 U.S. Motor 437 e.p.	6.50 – 7.00	6.75 – 7.00	7.25
60-62 400 e.p. gasoline...	7.25	7.375– 7.50	7.75
64-66 390 e.p. gasoline...	7.50	7.50 – 7.75	8.00
64-66 375 e.p. gasoline...	7.875– 8.00	7.875– 8.00	8.25
68-70 350-360 e.p. gasoline	8.50	8.50 – 8.625	9.25
****WEST TEXAS (F.o.b. West Texas refinery, for unrestricted shipment)**			
50-52 naphtha.....	6.125	6.125	6.50
56-58, 437 e.p. gasoline..	6.125	6.25	6.75
58-60, 437 e.p. gasoline..	6.125– 6.50	6.375– 6.625	6.75 – 7.00
NORTH LOUISIANA (N. La., Ark. and Miss. destination)			
58-60 U.S. Motor gasoline	7.25	7.25	7.50
ARKANSAS (Arkansas destination only)			
56-58 450 e.p. gasoline...	6.75	7.00	7.50
58-60 450 e.p. gasoline...	7.00	7.00	7.75
58-60 U.S. Motor 437 e.p.	7.25	7.25	7.75 – 8.00
‡CALIFORNIA			
54-58 U.S. Motor 437 e.p.	8.00 –12.50	8.50 –12.50	9.00 –12.50
58-61 375-400 e.p. gasoline	10.00 –13.50	10.00 –13.50	10.00 –13.50
42-45 Eng. dis. 445-480 e.p.....	7.50 – 8.50	7.50 – 8.50	7.50 – 8.50

‡3c tax to be added to California gasoline prices if used in state.

NATURAL GASOLINE

(Note: End point of all grades, not over 375 F. Corrosion test adopted Oct. 1, 1927; A.S.T.M. Method D130-27T; doctor test, July 2, 1928.)

OKLAHOMA			
Grade AA, 80-87.9, 90% Recovery.....	6.75 – 6.875	6.75	6.75 – 7.00
Grade A, 72-72.9, 90% Recovery.....	7.375	7.25 – 7.50	7.625– 7.75
Grade BB, 84-92, 85% Recovery.....	5.25	5.125	5.50
Grade B, 76-83.9, 85% Recovery.....	5.25 – 5.50	5.50	5.75 – 5.875
Grade C, 80-92, 78% Recovery.....	5.00 – 5.25	5.125	5.50
NORTH TEXAS (F. O. B. Breckenridge)			
Grade AA, 80-87.9, 90% Recovery.....	6.75 – 6.875	6.75	6.875– 7.00
Grade A, 72-79.9, 90% Recovery.....	7.375	7.50	7.75
Grade BB, 84-92, 85% Recovery.....	5.25	5.25	5.625
Grade B, 76-83.9, 85% Recovery.....	5.25 – 5.50	5.50	5.875
Grade C, 80-92, 78% Recovery.....	5.00 – 5.25	5.25	5.625
NORTH LOUISIANA (F. O. B. M[illegible]e District)			
Grade AA.....	†7.25	†7.25	†6.50
Grade BB.....	†5.50	†6.00	†6.00
Grade C.....	†5.375	†6.00	†6.00
CALIFORNIA			
75-85, 375-390 e.p. blend	7.00 – 7.75	7.00 – 7.50	7.50 – 8.00

MOTOR FUEL BLENDS

OKLAHOMA			
64-66 Blend 437 e.p.....	6.75 – 7.00	6.75 – 7.00	7.25 – 7.50

BURNING OILS

PENNSYLVANIA			
45 w.w. kerosene.....	7.00 – 7.50	7.00 – 7.50	7.00 – 7.625
46 w.w. kerosene.....	7.25 – 7.75	7.25 – 8.00	7.25 – 8.00
47 w.w. kerosene.....	7.25 – 7.75	7.50 – 8.25	7.50 – 8.00
300 mineral seal.....	7.00 – 7.25	7.50 – 7.75	7.25 – 7.75
OKLAHOMA			
41-43 w.w. kerosene.....	5.25	5.25	5.25 – 5.50
42-44 w.w. kerosene.....	5.75	5.75	6.00
KANSAS (F. O. B. refinery Kansas destination)			
41-43 w.w. kerosene.....	5.75 – 6.00	5.75 – 6.00	5.75 – 6.00
42-44 w.w. kerosene.....	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
NORTH TEXAS			
40-42 w.w. kerosene.....	5.25	5.25	5.25
41-43 w.w. kerosene.....	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625
NORTH LOUISIANA (N. La., Ark. and Miss. destination)			
41-43 w.w. kerosene.....	5.75	5.75	5.75 – 6.00
42-44 w.w. kerosene.....	††6.25	††6.25	††6.25
ARKANSAS (Arkansas destination only)			
42-44 kerosene.....	6.25	6.25	6.25
CALIFORNIA			
38-40 w.w. kerosene.....	6.50 – 7.00	6.50 – 7.00	6.50 – 7.00

†Prices nominal ††Only one refiner quoting *Quotations only **Represents both sales and quotations

When You Compare These Prices, Please

In interpreting and comparing the prices on these pages the industry must do so fairly and, in turn, accurately.

Please note—

1st—The date of these prices and those with which you compare them.

2nd—The source of origin of the material—that is the actual geographical district from which the material will really be shipped.

3rd—The destination of the goods which has a great deal to do with the price.

4th—The specifications of the material. There is not much off specification stuff on the market but what little there is is not always identified as such and the price that it bears generally gets a lot of free advertising.

5th—The terms of the sale. Prices given herein, except where otherwise noted, are for spot sale and shipment within ten days. Other terms will make a difference in the price.

6th—The quantity that is available, or is sold, at a given price. Generally the bottom price of the market—and oftentimes the top price too,—has only one or two cars moving on it. When the seller who has offered those particular cars has sold them, he and his low price are generally out of the market.

7th—These prices are records of sales actually made, or if no sales then they are quotations by reputable companies on the days noted. They are arrived at at the close of the business day. What the prices will be on the next day depends entirely upon what the seller and buyer do. These prices are the history of yesterday. Tomorrow is a new day.

THE foregoing are simple, obvious rules that apply to all markets whether of commodities or stock but it is surprising how many people in the oil industry do not consider these points in studying prices and the markets. The other day we received an emphatic complaint from a reader because, he said, our prices in NATIONAL PETROLEUM NEWS, which is mailed Wednesday morning of each week, did not jibe with the prices of a daily paper which in its Thursday morning's issue showed the prices of Wednesday.

That subscriber overlooked completely the dates at the head of each column of prices and did not appreciate—because he did not read these dates—that the prices given here, except where otherwise may be noted, are for Monday of each week. He was comparing Monday's price with Wednesday's price and expecting them to be the same.

Also he was comparing our weighted average price made by Oklahoma refiners on goods shipped from their refineries in that state and from nowhere else, with the resale price at Chicago which includes gasoline no matter where it is shipped from. He should have compared our resale price for Chicago as given in the *Oilgram* every day with the newspaper's price for the same day, in which event he would have found that they coincided, some days almost to the proverbial nat's eyelash.

NATIONAL PETROLEUM NEWS and Platt's *Oilgram*, have an organization which does nothing but gather prices, that and nothing else, every day. It is the only organization of its kind in the oil industry, the only one devoting its full time to prices alone. There is being spent on this service as much money as the total volume of business done by some of the smaller oil papers.

The widespread and ever increasing use of these prices by the entire industry in this country and abroad is testimony of their absolute accuracy. But they must be interpreted and used for what they are and not for what they are not.—*Editor.*

California Market

Gasoline, Fuel Oil Weak

LOS ANGELES, Feb. 9.—During January, stocks of gasoline and fuel oil, began to back up on the refiners of California, especially at the smaller plants, and for that reason refinery runs had to be reduced and both gasoline and fuel oil showed weakness.

Refinery capacities were increased last year beyond requirements, but storage facilities at the several smaller plants did not keep pace.

Some fuel oil in tank cars was sold at 45 cents a barrel but most refiners were getting from 50 to 60 cents for their product.

The tank car gasoline price has also shown further weakness, due to increased runs by small refiners without ample storage, and it is reported that some gasoline has moved to out of state points at a shade under 8 cents, although most of it has been shipped at prices ranging from 8 to 9 cents. Shipments to points within the state have moved at prices ranging from 9.50 to 12.50 cents without tax.

The retail gasoline situation began to show some improvement this week, with some of the more important resellers moving up their selling price to 17.50 to 18.50 cents, from former low prices of 15.50 to 16.50 cents.

The export gasoline price situation is showing indications of improvement. The major companies, generally speaking, are not in a hurry to sell at less than 8 cents, which they must do if they come into the present market, in competition with the Gulf. California gasoline for export usually brings 1 cent under the ruling price at the Gulf.

Natural gasoline is holding up fairly well, considering the large production. Spot prices now range between 7 and 7.75 cents, with plenty available around 7.50 cents.

Production can be expected to continue in large volume, due to many wells due for completion at Long Beach, Santa Fe Springs and Lawndale.

Other products are unchanged.

Refinery Markets on Wax, Lubricants and Heavy Oil Products

Prices given below are in cents per gallon, F. O. B. refinery, except where $ is shown

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

NEUTRAL OIL

PENNSYLVANIA	Prices Feb. 11	Prices Feb. 4	Prices Jan. 28
Vis.		(Viscosity at 70°F.)	
200 No. 3 Assoc. Filt....	27.50 –28.50	27.50 –29.00	28.00 –29.00
180 No. 3 Assoc. Filt....	24.50 –25.50	24.50 –26.50	24.50 –26.50
150 No. 3 Assoc. Filt....	21.00 –22.00	21.50 –23.00	21.50 –23.00
	(Non Viscous)		
34 Grav. 330-340 Flash...	7.25 – 7.75	7.25 – 8.25	7.75 – 9.00
**OKLAHOMA			
Vis. Color		(Viscosity at 100°F.)	
100—No. 2	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00
150—No. 3	7.50 – 8.50	7.50 – 8.50	7.50 – 8.50
150—No. 4	6.50 – 7.50	6.50 – 7.50	6.50 – 7.50
180—No. 3	8.75 – 9.50	8.75 – 9.50	8.75 – 9.50
180—No. 4	8.75 – 9.75	8.75 – 9.75	8.75 – 9.75
180—No. 5	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
200—No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
200—No. 4	9.25 –10.00	9.25 –10.00	9.25 –10.00
200—No. 5	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
220—No. 3	12.50 –13.50	12.50 –13.50	12.50 –13.50
220—No. 4	12.25 –12.50	12.25 –12.50	12.25 –12.50
220—No. 5	11.50 –12.00	11.50 –12.00	11.50 –12.00
240—No. 3	13.00 –13.50	13.00 –13.50	13.00 –13.50
240—No. 4	12.00 –13.00	12.00 –13.00	12.00 –13.00
240—No. 5	11.00 –13.00	11.00 –13.00	11.00 –13.00
280—No. 3	14.00 –15.50	14.00 –15.50	14.00 –15.50
280—No. 4	13.00 –14.00	13.00 –14.00	13.00 –14.00
280—No. 5	12.00 –13.00	12.00 –13.00	12.00 –13.00
300—No. 5-6	15.00 –17.00	15.00 –17.00	15.00 –17.00
GULF COASTAL			
Vis. Color		(Viscosity at 100°F., pour test 0)	
100—No. 2 Pale	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
200—No. 3 Pale	9.50 –10.00	9.50 –10.00	9.50 –10.00
300—No. 3 Pale	10.50 –11.00	10.50 –11.00	10.50 –11.00
500—No. 3½ Pale	12.50 –13.00	12.50 –13.50	12.50 –13.50
750—No. 4 Pale	15.00 –15.50	15.00 –15.50	15.00 –15.50
200—No. 5½ Red Oil	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
300—No. 5½ Red Oil	9.25 – 9.75	9.25 – 9.75	9.25 – 9.75
500—No. 6 Red Oil	10.50 –11.00	10.50 –11.25	10.50 –11.25
750—No. 6 Red Oil	13.00 –13.50	13.00 –13.50	13.00 –13.50
CALIFORNIA			
Vis. Color		(Viscosity at 100°F.)	
100—No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
200—No. 3	11.50	11.50	11.50
300—No. 3	13.00	13.00	13.00
450—No. 3	15.50	15.50	15.50
550—No. 3	16.50	16.50	16.50
600—No. 3	17.00	17.00	17.00
200—No. 5	11.00	11.00	11.00
300—No. 5	12.00	12.00	12.00
400—No. 5	14.00	14.00	14.00
500—No. 5	15.00	15.00	15.00
600—No. 5	16.00	16.00	16.00
700—No. 7	18.00	18.00	18.00

CYLINDER STOCKS

**OKLAHOMA			
190-200 Vis. at 210° Brt. St.	33.00	33.00	33.00
150-160 Vis. at 210° Brt. St.	31.00	31.00	29.00 –31.00
600 E. St. 140-150 Vis.-210°	18.00 –19.00	18.00 –19.00	18.00 –19.00
600 St. Ref. Olive Green	10.00 –12.00	10.00 –12.00	10.00 –12.00
600 St. Ref. Dark Green	8.00 –10.00	8.00 –10.00	8.00 –10.00
Black Oil	5.00	5.00	5.00
PENNSYLVANIA		(1-inch Immersion Test)	
600 Steam Refined dark	22.00 –23.00	22.00 –22.50	21.50 –23.00
600 Steam Refined, filterable	22.00 –25.00	22.50 –24.00	22.00 –24.00
650 Steam Refined	28.00 –30.00	28.00 –30.00	27.00 –30.00
600 Flash	29.00 –33.00	30.00 –33.00	29.00 –33.00
625 Flash	‡38.00	36.00 –38.50	‡34.00
600 Warren E	25.50 –26.50	26.00 –29.00	26.00
600 Oil City E	24.50 –25.00	25.50 –28.00	25.00 –27.00
600 D Filtered	29.00 –30.00	29.00 –30.00	28.50 –30.00
Cold Test Stock, 40-50p. p., 140-150 vis. at 210° 540-550 flash, No. 8 color	37.50 –42.00	39.00 –41.00	38.00 –41.00
40-50 p.p., 140-150 vis. at 210°, 540-550 flash, No. 6-6½ color diluted	37.00 –41.00	37.00 –40.00	36.00 –40.00

‡One seller quoting.

WAX

	Prices Feb. 11	Prices Feb. 4	Prices Jan. 28
PENNSYLVANIA Per pound, New York			
122-124 white crude scale	4.00 – 4.75	4.375– 4.75	4.75 – 5.00
124-126 white crude scale	4.50 – 4.625	4.625– 4.75	‡4.875
‡One seller quoting.			
OKLAHOMA			
**124-126 White Crude Scale	3.75 – 4.50	4.00 – 4.50	4.00 – 4.50
CALIFORNIA			
White crude scale, per pound, ton lots	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50

FUEL OIL

PENNSYLVANIA (For outside Pittsburgh district)			
36-40 fuel oil	5.00 – 5.25	4.75 – 5.25	4.75 – 5.25
30-34 fuel oil	4.50 – 4.75	4.625– 4.75	4.625– 4.875
28-32 fuel oil	4.50 – 4.75	4.625	4.625– 4.75
OKLAHOMA			
38-40 straw distillate	4.00 – 4.125	3.875	3.875
36-38 straw distillate	3.75 – 3.875	3.625	3.50 – 3.625
32-36 gas oil, straw	‡3.25	‡3.00	‡2.75 – 3.00
32-36 dark gas oil	‡3.00	‡2.75 – 2.875	‡2.625– 2.875
28-30 fuel oil (in bbls.)	$0.95 – 1.00	$0.925– 0.975	$0.925– 0.975
26-28 fuel oil (in bbls.)	$0.70 – 0.725	$0.70 – 0.725	$0.70 – 0.725
24-26 fuel oil (in bbls.)	$0.625– 0.675	$0.625– 0.675	$0.625– 0.675
22-26 fuel oil (in bbls.)	$0.575– 0.625	$0.575– 0.625	$0.575– 0.625
18-22 fuel oil (in bbls.)	$0.525– 0.575	$0.525– 0.575	$0.55 – 0.60
16-18 fuel oil (in bbls.)	$0.525– 0.55	$0.525	$0.55
14-16 fuel oil (in bbls.)	$0.50 – 0.55	$0.50	$0.50 – 0.55
‡Zero cold test gas oil sells for 0.25 cent higher.			
KANSAS (F. O. B. refinery Kansas destination)			
38-40 straw distillate	4.25	4.00 – 4.125	3.625– 3.75
36-38 straw distillate	4.00	3.75	3.25 – 3.50
32-36 gas oil	3.25	2.75 – 3.00	2.75 – 3.00
24-26 fuel oil	*$0.75	*$0.75	*$0.75 – 0.80
18-22 fuel oil	*$0.65	*$0.65	*$0.70
NORTH TEXAS			
38-40 straw distillate	3.875	3.50	3.50
32-36 gas oil, cracked	2.75	2.50 – 2.625	2.50 – 2.625
32-36 St. reduced gas oil	2.75	2.50 – 2.625	2.50 – 2.625
24-26 fuel oil (in bbls.)	$0.725– 0.75	$0.70	$0.65 – 0.70
20-24 fuel oil	$0.70 – 0.725	$0.675– 0.70	$0.625
**WEST TEXAS (F.o.b. West Texas refinery, for unrestricted shipment)			
34-38 gas oil	3.00	3.00	3.00
30-32 gas oil	2.625– 3.00	2.625– 3.00	2.625– 3.00
18-22 fuel oil	$0.35 – 0.45	$0.35 – 0.45	$0.35 – 0.45
NORTH LOUISIANA (N. La., Ark. and Miss. destination)			
32-36 gas oil, dark	3.25	3.00	3.00
32-36 gas oil, straw	3.375	3.00 – 3.25	3.00 – 3.25
16-20 fuel oil (in bbls.)	$0.70	$0.70	$0.70
ARKANSAS (Arkansas destination only)			
32-36 gas oil, straw	3.375	3.25	3.25
32-36 gas oil	3.25	3.125– 3.25	3.125– 3.25
28-32 gas oil	3.00	3.00	3.00
CALIFORNIA (F. O. B. San Joaquin Valley. At San Francisco, 4c per bbl. more)			
14-18 fuel oil (per bbl.)	$0.45 –$0.65	$0.55 –$0.70	$0.60 –$0.70
14-18 Bunker oil (per bbl.)	$0.70 –$0.85	$0.70 –$0.85	$0.70 –$0.85
30-34 gas oil (per bbl.)	$1.00 –$1.15	$1.00 –$1.15	$1.00 –$1.15
27 Plus Diesel oil (per bbl.)	$0.90 –$1.00	$0.90 –$1.00	$0.90 –$1.00

PETROLATUMS

PENNSYLVANIA (In barrles, carload lots, f. o. b. refinery. In tank cars ⅝c to ¾c per pound less.) Two refiners quoting.			
Snow White	8.50 – 8.75	8.50 – 8.75	8.50 – 8.75
Lily White	7.625– 7.75	7.625– 7.75	7.625– 7.75
Cream White	6.625– 6.75	6.625– 6.75	6.625– 6.75
Light Amber	3.625– 3.875	3.625– 3.875	3.625– 3.875
Amber	3.375– 3.625	3.375– 3.625	3.375– 3.625
Red	3.125	3.125	3.125

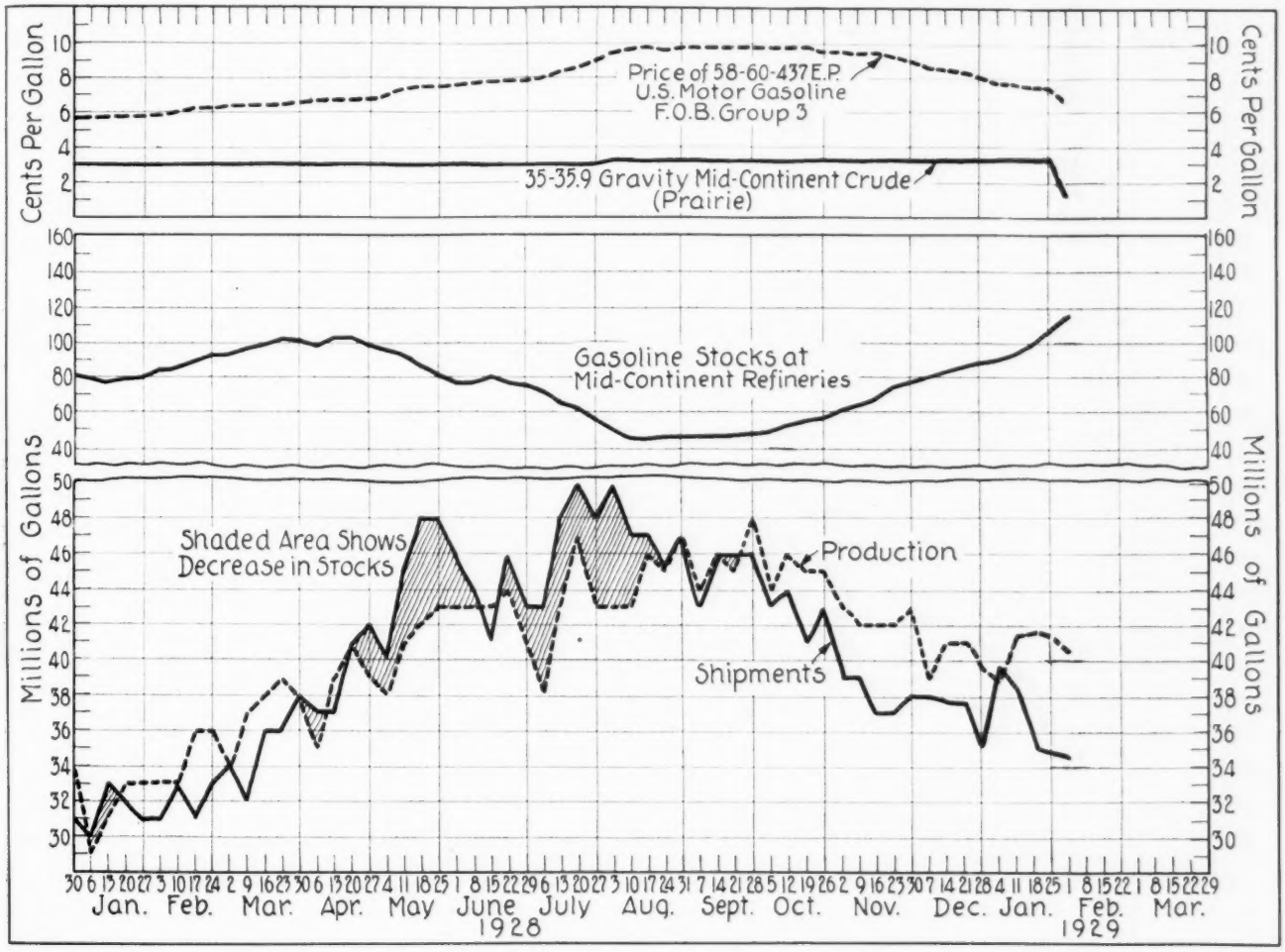
PETROLEUM COKE

**OKLAHOMA			
(Per ton in car lots)			
Lump	$4.50 – 5.00	$4.50 – 5.00	$4.50 – 5.00
Still run	$3.00	$3.00	$3.00
Breeze	$2.00	$2.00	$2.00

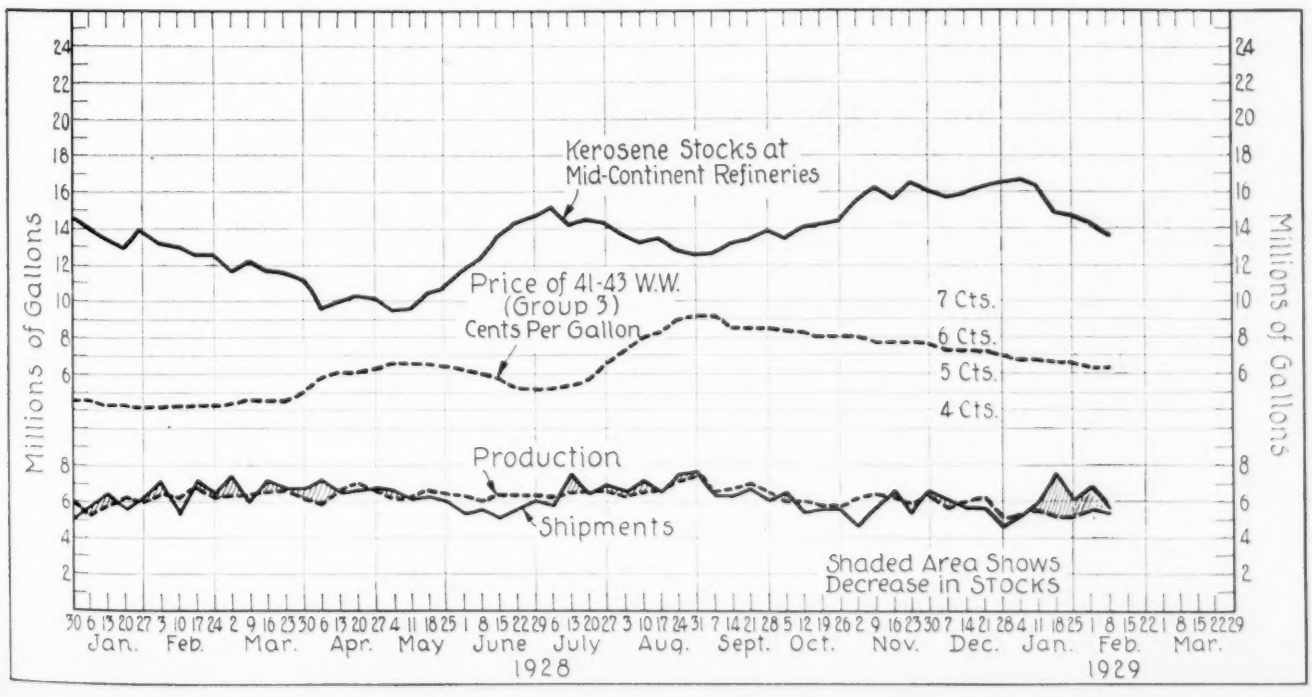
†Prices Nominal ††Only One Refiner Quoting *Quotations only **Represents Both Sales and Quotations.

Barometer of Mid-Continent Refinery Market—Week Ending February 8

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 88 Plants to National Petroleum News


Cents Per Gallon
Price of 58-60-437 E.P. U.S. Motor Gasoline F.O.B. Group 3
35-35.9 Gravity Mid-Continent Crude (Prairie)
Gasoline Stocks at Mid-Continent Refineries
Millions of Gallons
Shaded Area Shows Decrease in Stocks
Production
Shipments
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.
1928
1929

Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date as shown in the table on page 124.



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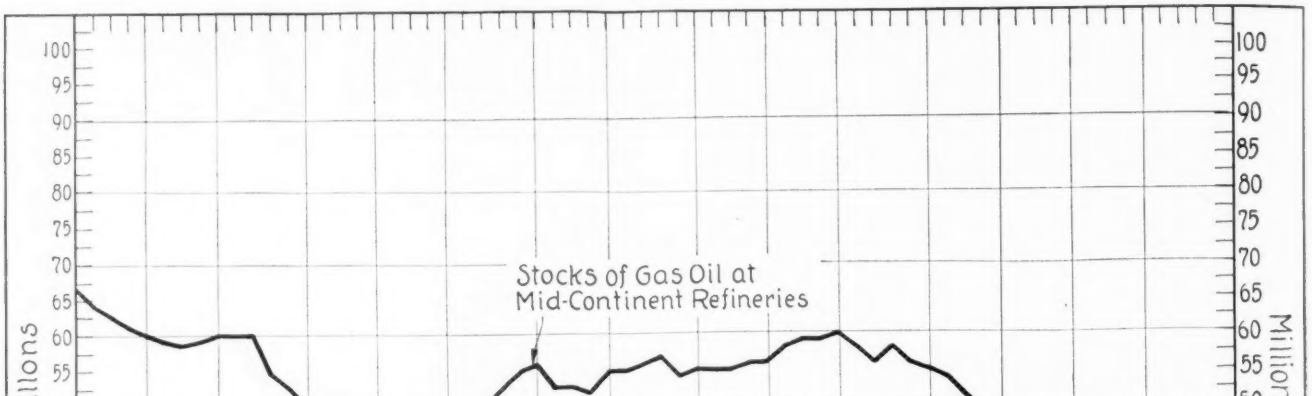
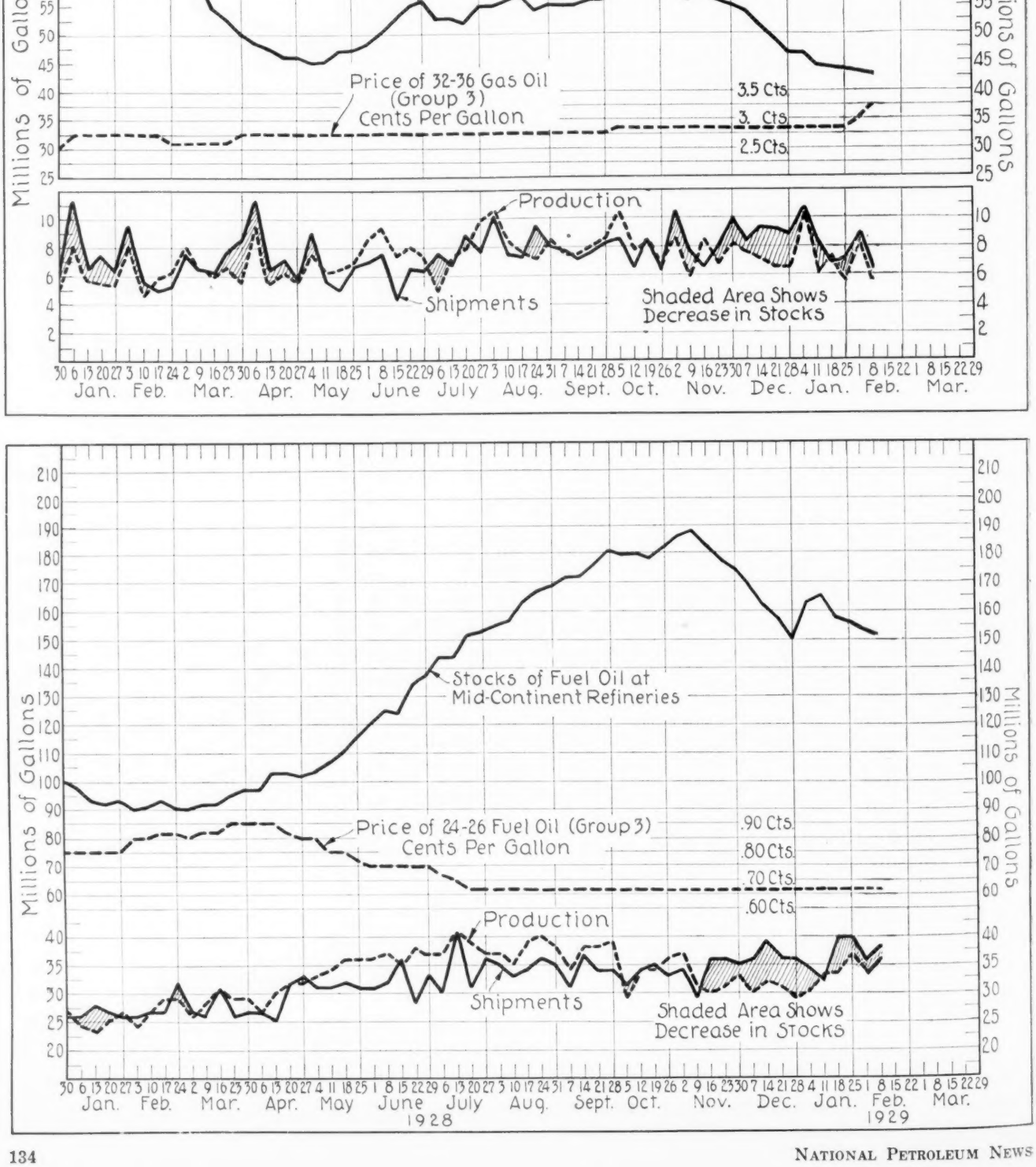

Millions of Gallons
Millions of Gallons
Stocks of Gas Oil at Mid-Continent Refineries
Price of 32-36 Gas Oil (Group 3) Cents Per Gallon
3.5 Cts.
3. Cts.
2.5 Cts.
Production
Shipments
Shaded Area Shows Decrease in Stocks
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.


Millions of Gallons
Millions of Gallons
Stocks of Fuel Oil at Mid-Continent Refineries
Price of 24-26 Fuel Oil (Group 3) Cents Per Gallon
.90 Cts.
.80 Cts.
.70 Cts.
.60 Cts.
Production
Shipments
Shaded Area Shows Decrease in Stocks
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.
1928
1929

Pennsylvania Market

Kerosene, Fuel Oil Active

CLEVELAND, Feb. 11. — Cold weather was probably the cause of the stimulated market which was evident during the past few days. Refiners today reported the demand for 45 water white was very active with demand for other grades less marked. Fuel oil, too, was reported moving very well.

Gasoline and wax were reported as in slack demand while the market for cylinder stocks, bright stocks, neutrals and other products was reported slow.

Wax Market

No Foreign Demand

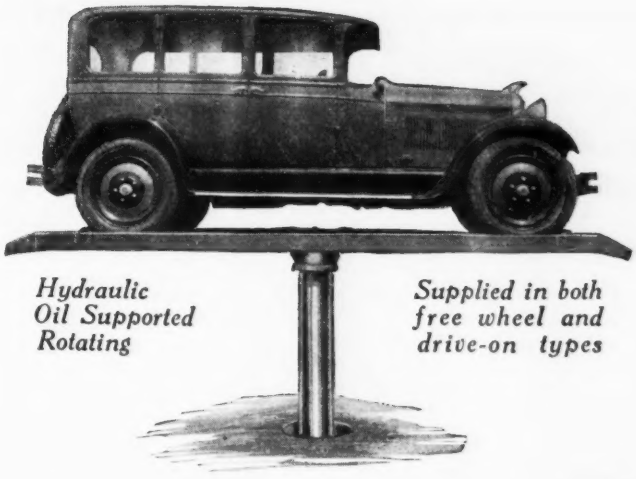
NEW YORK, Feb. 9.—Export wax markets over the past week were lacking in any particularly outstanding feature. Prices for white crude scale continued to ease off still further and foreign demand showed no signs of coming to life. The trade's ideas of prices covered a wide range as they have for the past few weeks.

Speculative sales were reported to have been made this week at considerably under 3.50 cents a pound for 122-124 and 124-126 A.m.p. scale and refiners' quotations continued at the opposite extreme. Their ideas of prices were still anywhere from 1 cent to 1.5 cent above this level, although most of them admitted they weren't getting any orders or that they were temporarily out of the market.

Brokers reported selling occasional small lots of scale at 3.50 to 3.75 cents a pound and in some quarters it was believed the lower figure could be done on large volume business if there were any demand.

The lower melting point fully refined waxes were off about 0.125 cent a pound with 125-127 A.m.p. selling at 5.50 cents in some instances. Several sellers of this grade continued to quote 5.75 cents a pound. Demand for the fully refined grades also was negligible with little interest in the market at any price. The higher melting points continued relatively firm, however, with 135-137 A.m.p. held at 7.75 cents, minimum.

The New Orleans market was a shade higher both on scale and fully refined wax. One sale of 100 tons of scale was reported at 4 cents f.o.b. New Orleans and 125-127 A.m.p. fully refined was held at 5.75 cents, minimum.



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National Petroleum News, 1213 W. Third St., Cleveland, Ohio

Gulf Export Market

French Buyers Seek Mixed Cargoes

Staff Special
NEW YORK, Feb. 9

AFTER spending the greater part of the week in the doldrums, Gulf markets were brought to life Friday with the entrance of several French buyers into the market for mixed cargoes of gasoline and kerosene for April loading. The inquiry for domestic shipment also picked up slightly toward the end of the week but negotiations for both domestic and foreign deals were still pending on Saturday.

The renewal of inquiry from abroad was welcomed by the trade inasmuch as it marked the first interest independent foreign buyers have shown in the market since fixed prices were established for export shipments.

The French subsidiary of a leading United States refiner was inquiring for two cargoes of gasoline and kerosene, one for early April loading, the other for second-half-of-April loading. Formerly this buyer has dealt with suppliers direct but on this occasion the inquiries were entered through brokers which, the trade assumed, was for the purpose of testing the new price situation here.

The inquiry from a small Independent French company also was viewed by the trade as a test of the market. This company made firm offers through brokers at 8.25 cents for U. S. Motor gasoline and 9.75 cents for 64-66, 375 end point gasoline. Approximately 50,000 barrels of material for April loading was specified in the inquiry. Suppliers all held to 8.50 cents for the former grade and 10 cents for the latter and many of them even refused to counter offer at these figures.

There was no export inquiry for other oils and prices for all grades were the same as a week ago.

Prices quoted for domestic shipment out of the Gulf were pretty much in line with last week's prices. Most suppliers offered U. S. Motor gasoline at 8 to 8.125 cents and a firm offer at the former figure was made on one inquiry in the market. This, however, was rejected, buyers' ideas of prices being considerably less.

New York Domestic Market

Mid-Continent Gasoline in East

Staff Special
NEW YORK, Feb. 9

UNABLE to weather the pressure of competition from outside areas, gasoline prices along the Atlantic seaboard showed further recessions the past week. Spot demand continued extremely light.

Contract prices still were greatly advantageous compared with the spot market and jobbers holding them, which most of them do, were ordering out goods in rather liberal volume. The open weather prevailing in the east accounted largely for the relatively good contract demand.

The inquiry for open market stuff showed some improvement the forepart of the week and this feature tended to enliven the spirits of the trade somewhat. Competition from the Mid-Continent, however, again broke in and apparently took what little spot business that was to be had for a survey of the trade Saturday showed that very few spot orders for shipment from seaboard refineries and terminals had been booked over the week. Reports from jobbers were to the effect they were offered Mid-Continent gasoline on the basis of 6.125 cents f.o.b. Group 3. Under a 4.50-cent freight rate they were able to buy spot stuff for 0.375 to 0.875-cent less than they could get it delivered from the seaboard. It was the first time in several years, several observers in New York remarked, that Mid-Continent gasoline had worked its way as far east as the territory adjacent to New York City.

A reduction in spot prices to 9.75 cents, f.o.b. New York harbor, was made by at least two large sellers Saturday, and others, though not openly lowering their prices from 10 cents, stated they intended to meet competition at 9.75 cents. In checking over his sales for the week one of the largest refiners in New York harbor reported Saturday that he had sold but one spot car of gasoline all week; another reported he sold two cars during the first four days of the week. Both companies ordinarily do a large spot business.

Reports from the Philadelphia and Baltimore markets were much the same as those for New York harbor. Sellers stated they were refusing to shade 10 cents for the occasional spot business offered them and as a consequence their books were devoid of orders, except for those from regular customers of long standing.

Rumors to the effect that sellers in the foregoing markets were offering spot goods at the same prices they're getting under contracts were circulated through the trade every other day or so. This action, however, was found to have been taken only by refiners in the New England districts. Contracts based on posted tank wagon in the New England states are giving jobbers a delivered price of 11 cents and several large sellers in this area reduced their spot quotations to this level, which represented a drop of 0.75-cent in the spot market. Rumors to the effect that gasoline was available at 10.75 cents delivered could not be confirmed.

The inquiry for kerosene was a shade more active this week but few sales for shipment from the seaboard were said to have been made. Sellers reported Pennsylvania kerosene which could be bought for 7 cents precluded their getting any business at 8.50 cents, f.o.b. the seaboard, which was the minimum most companies were quoting. Prime white kerosene was available at 8.25 cents in New York harbor but even this could not compete with Pennsylvania prices.

Blowing of Still Gasket Burns Man to Death

TOLEDO, O., Feb. 7.—A man was burned to death at the plant of the Paragon Refining Co. here Feb. 5 when a manhead gasket on a crude still blew out. A slug of water got into the still and built up a pressure that caused the safety valve to blow, it is reported. The safety valves on the crude stills are set for 10 pounds pressure.

Several men were on top of the still putting out the fire resulting from the flash caused by the blowing of the safety valve when the gasket blew out, enveloping one of the workmen in flames. The gasket was of the asbestos type designed to resist high temperature, it is stated.

Gulf Coast Lubes Quiet

HOUSTON, Feb. 9.—Lubricant prices in south Texas refinery market are unchanged and market is quiet. A slowing down of spot shipments reflects seasonal conditions. Manufacturers report contract quantities of the various grades were moving about on schedule.

Burford Refinery at Pecos Operating

TULSA, Feb. 11.—The new refinery of the Burford Oil Co., Pecos, Tex. began operating February 1. The plant is handling 6,000 barrels daily of Winkler county crude, which is transported through a pipe line owned jointly by Skelly Oil Co. and Burford Oil Co. The pipe line has been in operation since last July.

The company now is constructing two cracking units which will handle 4,000 barrels daily of charging stock.

The company's branded "Crystal Gasoline" was introduced in west Texas and New Mexico followed the beginning of plant operation. The general sales offices will be in Pecos, under the direction of B. D. Dawson. John J. Thomas, general superintendent for the company, will be in charge of the refinery. The refinery was built under his direction.

To Install Cracking Stills

(Staff Special)

TULSA, Feb. 9.—Officials of the Globe Oil & Refining Co. announce plans for enlarging their Cushing refinery which was leased last summer from the Sinclair Refining Co. Two 2,000-barrel Jenkins units and some storage tanks will be constructed, the cost to be approximately $450,000. The plant has been operated in west Texas crude oil, an average of 10,000 barrels a day being put through the stills. The tops were returned to the Shell Petroleum Corp. and pumped to St. Louis, the Globe company selling the fuel oils manufactured.

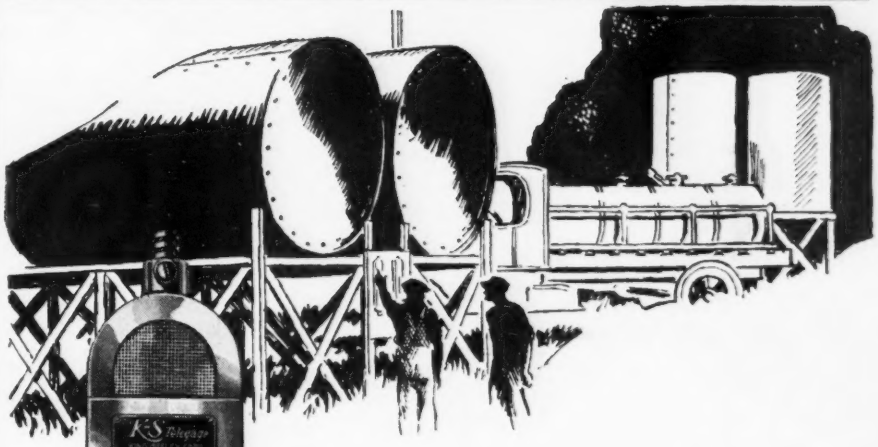
Manhattan Name Change

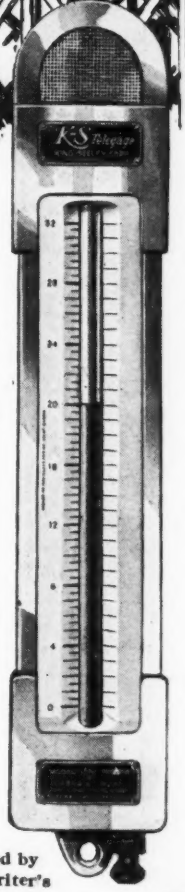
(Staff Special)

TULSA, Feb. 9.—Officials of the Independent Oil & Gas Co. have announced that signs on all the stations and properties acquired last summer from the Manhattan Oil Co. are being changed, and that the work will be completed within the next two or three weeks. The Manhattan company was bought by the Independent company although stockholders of the former company now are stockholders of the latter.

TULSA, Feb. 11.—Frank Spencer, president of Spencer Petroleum Co., Chicago, was a visitor in Tulsa Feb. 1.

THE HYDROSTATIC DISTANT READING GAUGE





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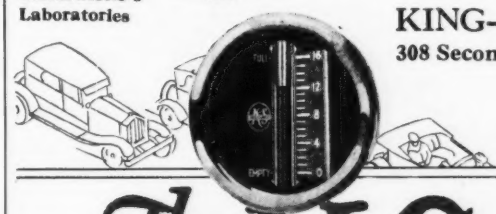

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Standard factory equipment on three-fourths of all cars selling for $700 or more.

Complete Seaboard Market

(Export markets for whole year given in OIL PRICE HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for the whole year)

Eastern Domestic Market

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, representing majority of quotations.)

U. S. MOTOR GASOLINE	Feb. 11	Feb. 4	Jan. 28
New York harbor	9.75 –10.00	10.00 –10.25	10.00 –10.25
Portland district	*11.50	*12.25	*12.25
Boston district	*11.00	*11.75	*11.75
Providence district	*11.00	*11.75	*11.75
Philadelphia district	10.00	10.00	10.25
Baltimore district	10.00	10.00 –10.25	10.25
Norfolk district	10.00	10.25	10.25
Charleston district	10.00	10.00 –10.25	10.00 –10.25
Savannah district	9.75 –10.00	9.75 –10.25	9.75 –10.25
Jacksonville district	10.00	10.00	10.00
CALIFORNIA U. S. MOTOR GASOLINE			
New York harbor	10.00	10.00	10.25
Philadelphia district	10.00	10.00	10.25
Baltimore district	10.00	10.00 –10.25	10.25
WATER WHITE KEROSENE			
New York harbor	8.50	8.50 – 9.00	8.50 – 9.00
Philadelphia district	8.50	8.50	8.50
Baltimore district	8.50 – 9.00	9.00	9.00
GAS OIL: 28-34 Gravity			
New York harbor	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
Boston district	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00
FURNACE OIL: 36-40 Gravity			
New York harbor	6.50	6.50	6.50
Boston district	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
GRADE C BUNKER OIL			
New York harbor	$1.05	$1.05	$1.05
Boston district	$1.05	$1.05	$1.05
DIESEL OIL			
New York harbor	$2.00	$2.00	$2.00
MEDICINAL OILS, RUSSIAN			
885-890 s.g., 325-330 vis.	$0.80 – 0.90	$0.80 – 0.90	$0.80 – 0.90
870-875 s.g., 150-155 vis.	$0.67 – 0.77	$0.67 – 0.77	$0.67 – 0.77
860-865 s.g., 80-85 vis.	$0.65 – 0.75	$0.65 – 0.75	$0.65 – 0.75

Note: Above gasoline prices do not include inspection tax levied in some states.
*Minimum delivered. **Delivered prices.

New York Export Market

(Gasoline and kerosene in cases in bulk. Lubricating oils are per gal. in bbls. Cylinder oils are Penna. products)

	Feb. 11	Feb. 4	Jan. 28
U. S. Motor gasoline	26.40	26.40	26.40
43-45 150 w.w. kerosene	18.90	18.90	18.90
42-44 110 a.w. kerosene	17.65	17.65	17.65
CYLINDER OILS			
Bright stock, dark	44.00 –48.00	44.00 –48.00	44.00 –48.00
600 D filtered	37.00	36.50 –37.00	36.50
600 Warren E filtered	33.00 –36.00	34.00 –36.00	34.00 –38.00
600 s.r. unfiltered	29.50 –32.00	29.50 –31.00	29.50 –33.00
650 s.r. unfiltered	36.00 –38.00	35.00 –38.00	35.00 –38.00
600 flash, s.r.	38.00 –40.00	38.00 –40.00	37.00 –41.00
630 flash, s.r.	44.00 –46.00	44.00 –46.00	45.00 –50.00
RED ENGINE OILS (Vis. 100°)			
300 vis. No. 6½ color	20.00	20.00	20.00
250 vis. No. 6 color	19.50	19.50	19.50
200 vis. No. 6 color	18.00	18.00	18.00
PALE ENGINE OILS (Vis. 100°)			
230 vis. No. 3¾ color	23.50	23.50	23.50
180 vis. No. 3¼ color	19.00	19.00	19.00
100 vis. No. 2¼ color	16.00	16.00	16.00
MOTOR OILS (Vis. 100°)			
600 vis No. 7 color	33.00	33.00	33.00
500 vis. No. 6½ color	31.00	31.00	31.00
400 vis. No. 7¼ color	30.00	30.00	30.00
300 vis. No. 6 color	29.00	29.00	29.00
200 vis. No. 6 color	28.00	28.00	28.00
MEDICINAL OILS			
875-885 s.g.	$0.80	$0.80	$0.80
865-870 s.g.	$0.70	$0.70	$0.70
WAXES (In cents per pound, f.a.s. carload lots)			
WHITE CRUDE SCALE (In barrels)			
122-124 A.m.p.	3.50 – 3.75	3.75 – 4.00	4.00 – 4.125
124-126 A.m.p.	3.50 – 3.75	3.75 – 4.00	4.00 – 4.125
FULLY REFINED (In burlap bags)			
123-125 A.m.p. Phila.	5.50	5.50 – 5.625	5.625
125-127 A.m.p.	5.50 – 5.75	5.625– 5.75	5.625– 5.75
128-130 A.m.p.	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
130-132 A.m.p.	6.50	6.50	6.50
133-135 A.m.p.	7.25	7.25	7.25
135-137 A.m.p.	7.75	7.75	7.75
YELLOW CRUDE SCALE			
124-126 A.m.p.	3.50	3.75	4.00

Gulf Export Market

(Prices are f. o. b. Gulf oil terminals in Texas and Louisiana, shipments of 20,000 bbls. and over unless otherwise noted)

GASOLINE	Feb. 11	Feb. 4	Jan. 28
U. S. Motor	8.50	8.50	8.00 – 8.25
60-62 400 e.p.	9.50	9.50	9.50
61-63, 390 e.p.	9.75	9.75	9.75
64-66, 375 e.p.	10.00	10.00	10.00
U. S. Motor, cases (cargoes)	$1.75	$1.75	$1.75
64-66, cases (cargoes)	$1.90	$1.90	$1.90
KEROSENE			
44 water white	7.75	7.75	7.75
41-43 prime white	6.75	6.75	6.75
Water white, cases (cargoes)	$1.70	$1.70	$1.70
Prime white, cases (cargoes)	$1.60	$1.60	$1.60
DOMESTIC GAS & BUNKER OILS			
*26-30 translucent gas oil	3.75 – 3.875	3.75 – 3.875	3.75 – 3.875
*32 plus translucent gas oil	3.875	3.875	3.875
Grade C bunker oil	$0.95	$0.875–$0.95	$0.875–$0.95
Grade C bunker oil, cargoes	$0.65 –$0.70	$0.65 –$0.70	$0.65 –$0.70

*Less than ½ of 1% sulfur.

MEXICAN CRUDE AND BUNKER OILS (F. O. B. Steamer, Tampico)			
Heavy Panuco crude taxes to be paid	$0.90 –$0.95	$0.90 –$0.95	$0.90 –$0.95
Grade C bunker oil, for bunkering purposes, taxes paid	$1.05	$1.05	$1.05
SOUTH TEXAS LUBRICATING OILS (Viscosity at 100° F.: cold test 0) (Tanker, f.o.b. Houston)			
100 vis. No. 2 unfiltered pale	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
200 vis. No. 3 unfiltered pale	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
300 vis. No. 3 unfiltered pale	9.50 –10.50	9.50 –10.50	9.50 –10.50
500 vis. No. 3½ unfiltered pale	11.00 –12.00	11.00 –12.00	11.00 –12.00
750 vis. No. 4 unfiltered pale	13.00 –13.25	13.00 –13.25	13.00 –13.25
1200 vis. No. 5 unfiltered pale	16.00 –17.00	16.00 –17.00	16.00 –17.00
200 vis. No. 5-6 red oil	7.50 – 8.50	7.50 – 8.50	7.50 – 8.50
300 vis. No. 5-6 red oil	8.7. – 9.25	8.75 – 9.25	8.75 – 9.25
500 vis. No. 5-6 red oil	10.00 –10.50	10.00 –10.50	10.00 –10.50
750 vis. No. 5-6 red oil	11.50 –12.00	11.50 –12.00	11.50 –12.00
1200 vis. No. 5-6 red oil	15.00 –16.50	15.00 –16.50	15.00 –16.50

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	Feb. 11	Feb. 4	Jan. 28
Gasoline, U. S. Motor, 53-55 Gravity	7.50 – 8.00	7.50 – 8.00	7.50 – 8.00
Gasoline, U. S. Motor, blends and special cuts	8.25 –10.00	8.25 –10.00	8.25 –10.00
Gas Oil, 30-34, per barrel	$1.05 –$1.15	$1.05 –$1.15	$1.05 –$1.15
Diesel Oil, 27 plus, per barrel	$0.95 –$1.10	$0.95 –$1.10	$0.95 –$1.10
Bunker oil, 14-18, per barrel	$0.70 –$0.85	$0.70 –$0.85	$0.70 –$0.85
Fuel oil, 14-18 per barrel	$0.65 –$0.85	$0.65 –$0.85	$0.70 –$0.85
Kerosene, 38-40 w.w., 125-150 flash, per gal.	5.50 – 6.25	5.50 – 6.00	5.50 – 6.00
Cased Goods			
Gasoline, U. S. Motor	$1.75 –$1.85	$1.75 –$1.85	$1.75 –$1.85
Kerosene, 38-40 w.w., 125-150 flash	$1.45 –$1.50	$1.45 –$1.50	$1.45 –$1.50

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shillings per ton of 2240 pounds, British sterling; to American ports, cents per barrel.)

	Feb. 11	
	Crude & / or Fuel	Refined Oil & /or Spirits
Calif. to U. K. or Continental ports*	25–26	27
Gulf to U. K. or Continental ports*	14/6	16-17
North Atlantic to U. K. or Continental ports*	12/6	14-15
Calif. to North Atlantic ports (not E. of N. Y.)	55	65–70c
Gulf to North Atlantic ports (not E. of N. Y.)**	19–20	24-25

*Continental ports in the range between Bordeaux and Hamburg, both inclusive.
**For Venezuela loading 1c per bbl. additional. For Tampico loading 4c per bbl. additional.

Imperial Fuel Oils

Imperial Industrial Fuels meet the requirements of individual industries by being both competitive in price and selective in quality. The economics of industrial fuel use depends upon price and efficiency, and when we say; *"We Meet Equivalent Competition"*, the above is fully expressed.

To meet the requirements of users of industrial fuels we offer several grades.

Imperial Distillate Fuel	28-30° A. P. I.
Imperial Fuel Oil (*Light*)	24-26° A. P. I.
Imperial Fuel Oil (*Medium*)	20-22° A. P. I.
Imperial Fuel Oil (*Heavy*)	16-20° A. P. I
Imperial Fuel Oil (*Zero*)	14-18° A. P. I

Imperial Refineries

Imperial Refining Co. **San Angelo Refining Co.**
Kettle Creek Refining Co. **Wickett Refining Co.**

General Offices
TULSA, OKLAHOMA

Tank Wagon, Service Station Markets for Gasoline and Kerosene

(OIL PRICE HANDBOOK has t. w. and s. s. markets for the whole year, arranged for quick reference)

These Prices in Effect February 11, 1929, as Posted by Principal Marketing Companies

S.O. NEW JERSEY TERRITORY

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Atlantic City, N. J.	14	2	16	20	13
Newark, N. J.	14	2	16	20	13
Annapolis, Md.	14	4	18	22	13
Baltimore, Md.	14	4	18	22	13
Cumberland, Md.	14	4	18	22	13
Washington, D. C.	14	2	16	20	13
Danville, Va.	14	5*	19	23	13
Norfolk, Va.	14	5	19	23	13
Richmond, Va.	14	5	19	23	13
Roanoke, Va.	14	5	19	23	13
Petersburg, Va.	14	5	19	23	13
Charleston, W. Va.	14	4	18	22	13
Keyser, W. Va.	14	4	18	22	13
Parkersburg, W. Va.	14	4	18	22	13
Wheeling, W. Va.	14	4	18	22	13
Charlotte, N. C.	14	4	18	22	13
Hickory, N. C.	14	4	18	22	13
Mt. Airy, N. C.	14	4	18	22	13
Salisbury, N. C.	14	4	18	22	13
Charleston, S. C.	14	5	19	23	13
Columbia, S. C.	14	5	19	23	13

CONTINENTAL OIL

Denver, Colo.	13	3	16	18	14.5
Pueblo, Colo.	14	3	17	20	14.5
Grand Junc., Colo.	18.5	3	21.5	24.5	18
Casper, Wyo.	15	3	18	21	13
Cheyenne, Wyo.	16	3	19	22	14.5
Butte, Mont.	19.5	3	22.5	25.5	19
Helena, Mont.	19.5	3	22.5	25.5	19
Salt Lake City, Utah	17.5	3½	21	24	17
Boise, Ida.	19.5	4	23.5	26.5	19
Twin Falls, Ida.	19.5	4	23.5	26.5	19
Albuquerque, N. M.	17	5	22	25	17

S. O. CALIFORNIA

Phoenix, Ariz.	12	4	16	20	21.5
Los Angeles, Cal.	13.5	3	16.5	20.5	15.5
Fresno, Cal.	14	3	17	21	16.5
San Francisco, Cal.	14	3	17	21	15.5
Reno, Nev.	18	4	22	26	19
Portland, Ore.	14.5	3	17.5	21.5	16.5
Seattle, Wash.	14.5	2	16.5	20.5	16.5
Spokane, Wash.	18.5	2	20.5	24.5	20.5
Tacoma, Wash.	14.5	2	16.5	20.5	16.5

S. O. LOUISIANA

Little Rock, Ark.	13	5	18	21	13
Alexandria, La.	12	4	16	19	†16
Baton Rouge, La.	11	4	15	18	†14.5
Lake Charles, La.	12.5	4	16.5	19.5	†16
New Orleans, La.	*12.5	4	*16.5	*19.5	†16
Shreveport, La.	12	4	16	19	†15
Lafayette, La.	12	4	16	19	†14
Bristol, Tenn.	15	3	18	22	14
Chattanooga, Tenn.	14.5	3	17.5	21.5	16
Knoxville, Tenn.	15	3	18	22	16
Nashville, Tenn.	14	3	17	21	16
Memphis, Tenn.	13	3	16	20	12.5

*New Orleans gasoline prices include 1c parish tax in addition to 4c state tax, and kerosene prices include 1c state tax and 1c parish tax.

†Kerosene price in Louisiana includes 1c state tax.

S. O. KENTUCKY

Ashland, Ky.	16	5	21	23	15.5
Catlettsburg, Ky.	16	5	21	23	15.5
Lexington, Ky.	15	5	20	22	15.5
Louisville, Ky.	15	5	20	22	15
Covington, Ky.	15	5	20	21	15.5
Clarksdale, Miss.	17	4	21	23	13
Gulfport, Miss.††	18.5	4	22.5	24.5	14
Jackson, Miss.	16	4	20	22	13
Natchez, Miss.	16.5	4	20.5	22.5	14
Vicksburg, Miss.	16.5	4	20.5	22.5	14
Birmingham, Ala.	16	4	20	22	13
Mobile, Ala‡.	17	4	21	23	15
Montgomery, Ala*	18	4	22	24	16.5
Atlanta, Ga.	17	4	21	23	†16.5
Augusta, Ga.	17	4	21	23	†15.5
Macon, Ga.	17	4	21	22	†16.5
Savannah, Ga.	16	4	20	22	†15.5
Jacksonville, Fla.	17	5	22	24	14.5
Miami, Fla.	18	5	23	25	15.5
Tampa, Fla.	17	5	22	24	14.5
Pensacola, Fla**	18	5	23	25	14.5

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included. ‡Mobile gasoline prices include 1c city tax.

†Georgia kerosene prices include 1c state tax.

**Both tank wagon prices include 1c city tax at Pensacola, which went into effect Oct. 15, 1926.

††Both tank wagon prices at Gulfport include Harrison county privilege tax of 2c.

Latest Changes In Tank Wagon Prices

Gasoline Changes

S. O. Ohio—T.w. and s.s. prices gasoline cut 1c, Bryan, Hicksville, Salem, East Liverpool, Hamilton, Columbus, Worthington, Westerville, Rome, Steubenville, Portsmouth, New Boston, Mansfield and Kent, **Feb. 8.** T.w. at those points is 16c, s.s. 17c, including 3c tax. Elsewhere in Ohio, 17c and 18c respectively, including tax. S.s. price elsewhere in Ohio cut 1c, to 18c, **Feb. 5.**

S. O. Kentucky—Prices at Jackson were unchanged in Feb. 4 general cut, t.w. remaining 20c, s.s. 22c, including 5c tax.

S. O. Indiana—S.s. price only cut 1.2c, Peoria, to 14c, **Feb. 9.** T. w. unchanged at 14.2c.

Kerosene Changes

S. O. Kentucky—Kerosene cut 1.5c, Jackson, Miss., to 13c t.w., **Feb. 2.**

S. O. NEBRASKA

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Omaha, Neb.	14.25	2	16.25	18.25	12.25
McCook	15.75	2	17.75	19.75	13.75
Norfolk	14.75	2	16.75	18.75	12.75
North Platte	15.75	2	17.75	19.75	13.50
Scottsbluff	15.75	2	17.75	19.75	13.25

S. O. INDIANA

Chicago, Ill.	14	0	14	15	12
Decatur, Ill.	14.2	0	14.2	15.2	12.1
E. St. Louis, Ill.	13.4	0	13.4	14.4	11.2
Joliet, Ill.	14.4	0	14.4	15.4	12.3
Peoria, Ill.	14.2	0	14.2	14	12.1
Quincy, Ill.	14.2	0	14.2	15.2	11.9
Indianapolis, Ind.	14.2	3	17.2	18.2	13.2
Evansville, Ind.	14	3	17	18	13
South Bend, Ind.	14.4	3	17.4	18.4	13.4
Detroit, Mich.	14.8	3	17.8	18.8	13.7
Grand Rapids, Mich.	14.7	3	17.7	18.7	13.6
Saginaw, Mich.	14.9	3	17.9	18.9	13.8
Green Bay, Wis.	14.6	2	16.6	17.6	12.4
Madison, Wis.	14.3	2	16.3	17.3	12.1
Milwaukee, Wis.	14.1	2	16.1	17.1	11.9
La Crosse, Wis.	15.2	2	17.2	18.2	13
Minneapolis, Minn.	15.2	2	17.2	19.2	12.9
Duluth, Minn.	15.5	2	17.5	18.5	12.9
Mankato, Minn.	15.1	2	17.1	18.1	12.7
Des Moines, Ia.	14.5	3	17.5	18.5	12.3
Davenport, Ia.	14.5	3	17.5	18.5	12.3
Sioux City, Ia.	14.1	3	17.1	18.1	11.9
Mason City, Ia.	14.5	3	17.5	18.5	12.3
St. Louis, Mo.	*13.9	2	15.9	16.9	11.3
Kansas City, Mo.	†14.9	2	16.9	17.9	10.6
St. Joseph, Mo.	†14.5	2	16.5	17.5	11.2
Fargo, N. D.	16.9	2	18.9	19.9	14.9
Grand Forks, N. D.	17.2	2	19.2	20.2	15.2
Minot, N. D.	16.9	2	18.9	19.9	14.9
Pierre, S. D.	15	4	19	20	13.4
Huron, S. D.	15.3	4	19.3	20.3	13.7
Wichita, Kans.	12.8	2	14.8	15.8	10.8
Bartlesville, Okla.	12.5	3	15.5	16.5	10.5

S. O. Indiana's quantity contract price schedule on tank truck deliveries of gasoline, figured from the service station price, is 2c for 500 gals. or more a month; 2½c for 2000 gals. or more a month and 3c for 6000 gals. or more a month.

*Includes city tax of ½c.

†Includes city tax of 1c.

S. O. OHIO

†At 25 Ohio points	*13	3	*16	17	12
Elsewhere in Ohio.	*14	3	*17	18	12

†These 25 points are: Youngstown, Niles, Warren, Akron, Cuyahoga Falls, Kenmore, Barberton, Canton, Marion, Lima, Perrysburg, Bryan, Hicksville, Salem, East Liverpool, Hamilton, Columbus, Worthington, Westerville, Rome, Steubenville, Portsmouth, New Boston, Mansfield and Kent.

*Dealers discount is 2c off t.w. price. Service Station discounts eliminated Jan. 29. Governmental agencies, public utilities and commercial accounts also get 2c off posted tank wagon price, instead of off service station price as formerly.

MAGNOLIA PETROLEUM

Muskogee, Okla.	**13	3	16	18	12
Oklahoma City.	**13	3	16	18	12
Tulsa, Okla.	**14	3	17	19	10
Fort Smith, Ark.†	13	†3	16	19	13
Little Rock, Ark.	14	5	19	22	13
Texarkana, Ark.*	14	*2	16	20.5	13
Dallas, Tex.	14	2	16	20	12
Fort Worth, Tex.	11	2	13	16	12
Houston, Tex.	14	2	16	20	13
San Antonio, Tex.	11	2	13	17	11
El Paso, Tex.	15	2	17	20	16

*Within city of Texarkana, the state tax on gasoline is 2c per gal. conforming with the Texas state tax. In this district outside of the city the 5c Arkansas tax applies.

†Within city of Fort Smith, Oklahoma tax of 3c applies. In this district outside of the city, the 5c Arkansas tax applies.

**Less 2c to dealers.

S. O. NEW YORK

Due to local price conditions at many points in S. O. New York territory, actual prices on both gasoline and kerosene are being made at under the posted tank wagon prices published below.

New York City	17	0	17	*19	15
Albany, N. Y.	15	0	15	17	15
Buffalo, N. Y.	15	0	15	17	14
Rochester, N. Y.	15	0	15	17	13
Syracuse, N. Y.	15	0	15	17	13
Boston, Mass.	16	2	18	20	15
Augusta, Me.	16	4	20	22	15
Manchester, N. H.	16	4	20	22	15
Burlington, Vt.	15	3	18	20	15

Note: S. O. New York allows concessions of 1 to 2c per gal. to dealers under posted tank wagon prices

*The Standard of New York does not operate stations in New York City. This figure is the retail price of a principal station operator in New York, selling Socony gasoline.

ATLANTIC REFINING

Pittsburgh, Pa.	†15	*	†15	20	14
Philadelphia, Pa.	†15	*	†15	20	14
Allentown, Pa.	†15	*	†15	20	14
Erie, Pa.	†15	*	†15	20	14
Scranton, Pa.	†15	*	†15	20	14
Altoona, Pa.	†15	*	†15	20	14
Dover, Del.	†15	3	†18	20	14
Wilmington, Del.	†15	3	†18	20	14

Above prices include these inspection fees on both gasoline and kerosene, per gallon: Alabama, 1/40c on gasoline, 1/2c kerosene; Arkansas, 1/20c on both; Colorado, 1/10c on both; Florida, 1/8c on both; Indiana, 2/25c on both; Kansas, 1/5Uc on both; Louisiana, 1/32c on gasoline, 1c on kerosene; Minnesota, 3/50c on both; Missouri, 1/50c on both; Nebraska, 3/50c to 1/2c on both; North Carolina, 1/4c on both; North Dakota, 1/20c on both; Oklahoma, 4/25c on both; South Carolina, 1/8c on both; South Dakota, 1/10c on both; Tennessee, 2/5c on gasoline and 1/2c on kerosene; Wisconsin, 3/50c on both.

Kerosene inspection fees only: Iowa, 13/100c; Michigan, 1/5c to 4/5c per gal.

In Illinois, cities and villages have the power to appoint oil inspectors and fix inspection fees which is done in some instances. In some cases in the above states or other states there are local inspection fees.

Tank Wagon, Service Station Markets for Gasoline and Kerosene

Prices in Effect February 11, 1929

ATLANTIC REFINING, Cont'd

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Boston, Mass.	16	2	18	20	15
Springfield, Mass.	16	2	18	20	15
Worcester, Mass.	16	2	18	20	15
Providence, R. I.	16	2	18	20	15
Hartford, Conn.	16	2	18	20	14
New Haven, Conn.	16	2	18	20	15
Atlantic City, N. J.	16	2	18	20	13
Camden, N. J.	16	2	18	20	13
Trenton, N. J.	16	2	18	20	13
Annapolis, Md.	16	4	20	22	13
Baltimore, Md.	16	4	20	22	13
Hagerstown, Md.	16	4	20	22	13
Richmond, Va.	16	5	21	23	13
Wilmington, N. C.	16	4	20	22	13
Brunswick, Ga.	18	4	22	24	**15.5
Jacksonville, Fla.	18	5	23	25	14.5

*3-cent state tax is collected by retail dealer and paid by him directly to state.

†The Atlantic Refg. Co. recognizes a 2c a gal. discount from its posted tank wagon market on sales to dealers for purposes of resale.

The company also recognizes a maximum discount of 2c per gallon to commercial accounts under contract for one year.

**Georgia kerosene prices include 1c state tax.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changes)

	Oleum Spirits	V.M.&.P. Naphtha	Cleaner Naphtha
Chicago	14.7	16.2	18
Detroit	16.4	17.9	19.7
Kansas City	†14.9	†16.4	†18.2
Milwaukee	15.4	*18.9	*20.7
Minneapolis	*18.7	*20.2	*22
St. Louis	14.6	16.1	17.9
New York		18	21
Boston		18	21

*Includes 2c state tax. †Includes 1c city tax.

PETROLEUM SPIRITS

Tank Cars (Solvent)	
New York refineries	12
New England refineries	12
Philadelphia refineries	12
Tank Wagons or Steel Barrels	
New York	18
New England	19
New Jersey	19
Pennsylvania	18

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

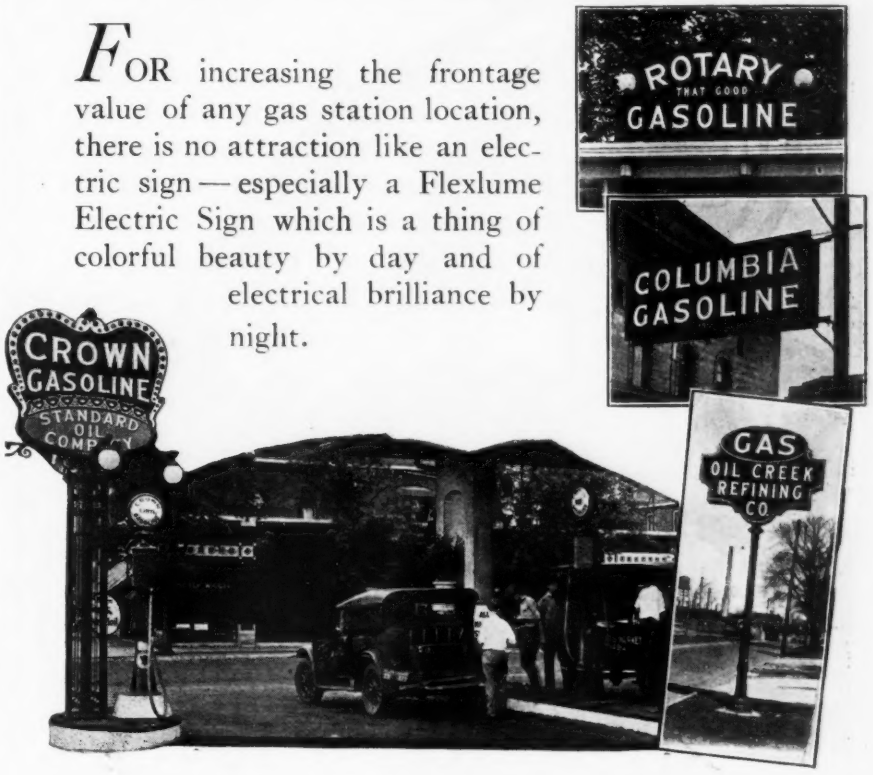
ONTARIO

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Toronto	19.5	3	22.5	26	21
Ottawa	19.5	3	22.5	26	21
Cochrane	24.5	3	27.5	..	26
Ft. William	22.5	3	25.5	29	22.5
MANITOBA					
Winnipeg	21.5	3	24.5	28	21 5
SASKATCHEWAN					
Regina	26	3	29	33	26
ALBERTA					
Edmonton	27.5	3	30.5	34	27.5
Calgary	23.5	3	26.5	30	23.5
BRITISH COLUMBIA					
Vancouver	22	3	25	29	23
QUEBEC					
Montreal	20.5	5	25.5	29	22
Quebec City	21.5	5	26.5	30	23
Three Rivers	21.5	5	26.5	30	23
NEW BRUNSWICK					
St. John	24	5	29	33	25
Moncton	24	5	29	33	25
NOVA SCOTIA					
Halifax	24	5	29	33	25
Sydney	24	5	29	33	25
PRINCE EDWARD ISLAND					
Charlottetown	24	5	29	33	25

Note: In districts surrounding these points 1c additional is added to city price.

Can Motorists as Easily "Spot" *Your* Station?

FOR increasing the frontage value of any gas station location, there is no attraction like an electric sign — especially a Flexlume Electric Sign which is a thing of colorful beauty by day and of electrical brilliance by night.



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St. Paul, — Minnesota

Crude Oil Prices (in Effect Feb. 11, 1929)

(Crude prices for the whole year in OIL PRICE HANDBOOK published annually)

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Penna. Grade Oil in New York Transit Lines (Alleghany, N. Y. District)	$4.10
Bradford District Oil in National Transit Lines (Bradford District)	4.10
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	4.00
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	4.00
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	3.90
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)	3.85
Cabell Grade in Eureka Pipe Lines (West Virginia)	1.45
Corning Grade in Buckeye Pipe Lines (Ohio)	1.75
Corning, O., heavy grade	1.65
Somerset Oil in Cumberland Pipe Lines (Kentucky)	1.75
Ragland Grade in Cumberland Pipe Lines (Kentucky)	$0.60

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines	$1.75

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Effective Jan. 25, 1929

Wooster (Oct. 17)*	$1.62	Preston	$1.45
Lima	1.50	Illinois	1.45
Waterloo	1.20	Plymouth	1.18
Indiana	1.27	West Kentucky	1.53

*Wooster crude run prior to Oct. 17, 1928 takes price of $1.52.

Pure Oil Co.

Midland, Midland County, Michigan	$1.64

CANADIAN CRUDE

Posted by Imperial Oil Refineries, Ltd.

Petrolia	$1.90
Oil Springs	1.97

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Prairie Oil & Gas Co.

(In Oklahoma, Kansas, North and East Central Texas)

Effective Jan. 25, 1929

Below 25	$0.60	35-35.9	$1.17
25-25.9	0.66	36-36.9	1.20
26-26.9	0.72	37-37.9	1.23
27-27.9	0.78	38-38.9	1.26
28-28.9	0.84	39-39.9	1.29
29-29.9	0.90	40-40.9	1.32
30-30.9	0.96	41-41.9	1.35
31-31.9	1.02	42-42.9	1.38
32-32.9	1.08	43-43.9	1.41
33-33.9	1.11	44 and above	1.44
34-34.9	1.14		

Humble Oil & Refining Co. Prices

(Ranger, North Texas, Mexia, Powell, Boggy Creek, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)

Jan. 24, 1929, same schedule as Prairie in above fields.

Mirando, Tex.	$0.80
Salt Flat, Tex.	0.80

Magnolia Petroleum Co.

(In Oklahoma, Kansas and North and East Central Texas)

Jan. 25, 1929, Magnolia posted in above fields and in Panola Co., same schedule as Prairie, except these grades:

Below 26	$0.60	29-29.9	$0.80
26-26.9	0.65	30-30.9	0.90
27-27.9	0.70	31-31.9	1.00
28-28.9	0.75		

Glasscock, Crane, Upton, Winkler Counties	0.65
Chalk field (Howard Co.)	0.65
Iatan district	0.93
Corsicana heavy	0.80
Luling	0.80

Carter Oil Co.

(Oklahoma and Kansas)

Jan. 24, 1929, same schedule as Prairie except Carter does not post oil below 25.

PANHANDLE, TEXAS

Humble Oil & Refining Co.

Effective Jan. 24, 1929

Hutchinson and Carson Counties:

Below 32	$0.72	38-38.9	$0.96
32-32.9	0.78	39-39.9	0.99
33-33.9	0.81	40-40.9	1.02
34-34.9	0.84	41-41.9	1.05
35-35.9	0.87	42-42.9	1.08
36-36.9	0.90	43-43.9	1.11
37-37.9	0.93	44 and above	1.14

Wheeler County:

Below 30	$0.70	37-37.9	$1.03
30-30.9	0.76	38-38.9	1.06
31-31.9	0.82	39-39.9	1.09
32-32.9	0.88	40-40.9	1.12
33-33.9	0.91	41-41.9	1.15
34-34.9	0.94	42-42.9	1.18
35-35.9	0.97	43-43.9	1.21
36-36.9	1.00	44 and above	1.24

Gray County:

Below 29	$0.69	37-37.9	$1.08
29-29.9	0.75	38-38.9	1.11
30-30.9	0.81	39-39.9	1.14
31-31.9	0.87	40-40.9	1.17
32-32.9	0.93	41-41.9	1.20
33-33.9	0.96	42-42.9	1.23
34-34.9	0.99	43-43.9	1.26
35-35.9	1.02	44 and above	1.29
36-36.9	1.05		

WEST TEXAS

Humble Oil & Refining Co.

Effective July 26, 1928

Winkler, Crane, Upton, Crockett, and Pecos Counties	$0.65

NORTH LOUISIANA—ARKANSAS FIELD

Prices of Standard Oil Co. of Louisiana

Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton, De Sota and **Cotton Valley.

Effective Jan. 26, 1929

Below 28	$0.78	36-36.9	$1.20
28-28.9	0.84	37-37.9	1.23
29-29.9	0.90	38-38.9	1.26
30-30.9	0.96	39-39.9	1.29
31-31.9	1.02	40-40.9	1.32
32-32.9	1.08	41-41.9	1.35
33-33.9	1.11	42-42.9	1.38
34-34.9	1.14	43-43.9	1.41
35-35.9	1.17	44 and above	1.44

**Cotton Valley, below 36, $0.75. Beginning with 36-36.9, same schedule as above.

Smackover, below 24	$0.75
do 24 and above	0.90
Bellevue	1.20
*Urania, La.	0.90
†East El Dorado	0.75

*Posted by Louisiana Oil Refining Corp.
†Posted by Magnolia Petroleum Co.

Jan. 25, The Texas Co. same schedule in Louisiana as Standard, plus these grades: 24-24.9, $0.60; 25-25.9, $0.66; 26-26.9, $0.72; 27-27.9, $0.78.

Jan. 26, Magnolia Petroleum met Standard schedule in Louisiana-Arkansas fields.

STEPHENS, ARKANSAS

Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.

Effective Jan. 28, 1929

Below 28	$0.70	30-30.9	$0.82
28-28.9	0.74	31-31.9	0.86
29-29.9	0.78	32 and above	0.90

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective Jan. 26, 1929

Grades A	$1.20	29-29.9	$1.15
Grades B:		30-30.9	1.17
Below 25	1.05	31-31.9	1.19
25-25.9	1.07	32-32.9	1.21
26-26.9	1.09	33-33.9	1.23
27-27.9	1.11	34-34.9	1.25
28-28.9	1.13	35 and above	1.27

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling, Pierce Junction, Sugarland and Raccoon Bend. All other fields are Grades A only.

Crude Import Duty May Obtain Hearing

WASHINGTON, Feb. 7.—A gesture toward putting crude petroleum on the dutiable list in the next tariff revision will be made this month if Mid-Continent proponents thereof think it worth while to spend the money therefor. The House ways and means committee has set aside Feb. 21, 22 and 23 for representations in behalf of the taking of commodities from the free to the dutiable list. It has notified Representative Howard of Oklahoma that the committee will be glad to hear anything that may be said in behalf of putting a duty on crude oil in accordance with the bill to that effect introduced by Mr. Howard. The latter has notified Mid-Continent interests but no definite plans have been made for appearances by them.

Representative Howard has been frank with his constituents to the effect that there is small, if any, possibility of any action being taken by the leaders in Congress either at the remainder of this session or at the special session which President Hoover has been euchered into agreeing to by the over ardent advocates of farm relief. The effort in respect of the special session will be to limit it to farm relief. The President cannot say that Congress shall consider only such and such things in a special session he may call. Governors of states are authorized, in some instances, to limit the subject to be considered by special sessions of legislatures but when the President of the United States calls Congress together he takes the lid off Pandora's box for the escape of any and all evils supposed to be inherent in the mere gathering of a legislative body.

The most serious fight ever made to take crude oil from the free list and put it on the dutiable list was made by Senator Penrose of Pennsylvania in the course of the tariff fight that followed President Taft's calling of a special session, in 1909, for a revision of the tariff primarily to improve the tariff relations between the United States and Canada. He got so far as to persuade the Senate committee to agree to put a duty on crude. Neither house of congress, however, would stand for it. Refiners, as a rule, were hostile. So were the ardent conservationists. The latter argued that every barrel of crude brought in from a foreign country saved a barrel that might be produced from this country's store in the ground. There is no indication that there has been any marked change in the politics of the situation in respect to crude oil.

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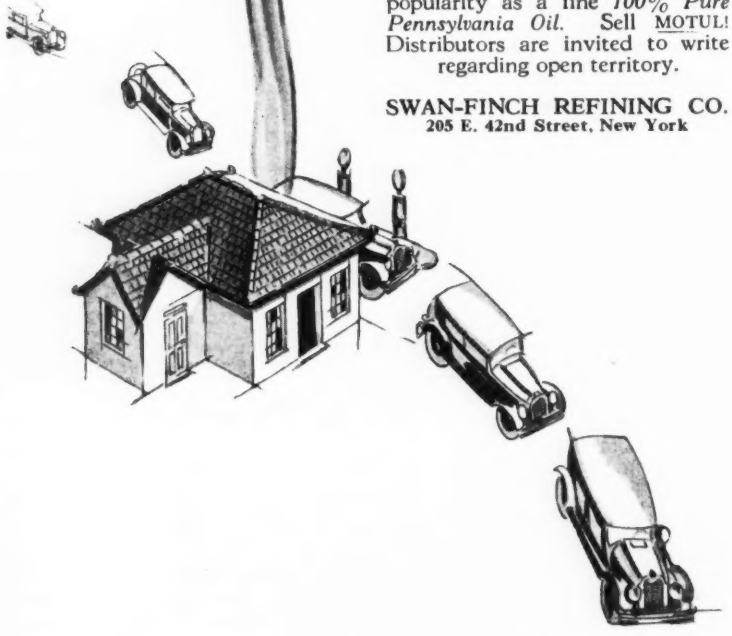

SWAN FINCH

Trucks

and trailers—their operation and maintenance—how they lower oil transportation costs—19 articles in the past 16 months' issues of NATIONAL PETROLEUM NEWS have been devoted exclusively to the subject of truck operation in the oil industry. They are listed here for your file reference:

1929

Trucks speeding cause accidents — Jan. 30, p. 45

1928

Tank truck possibilities revealed — Dec. 5, p. 125

Economical truck operation thru cost accounting — Dec. 5, p. 129

N. Y. tank truck monopoly causes suit — Dec. 5, p. 23

Tank Trucks for town and country — Oct. 17, p. 195

Truck tank monoply in New York — Oct. 10, p. 24

Truck trains transport gasoline cheaper — Oct. 10, p. 68

Truck and water transportation exceed rail — Sept. 26, p. 94

N. Y. truck tank prices caused by politics — July 4, p. 23

Fast truck features power unloader — July 4, p. 63

Trucks cut gasoline transportation costs — June 27, p. 69

Truck hauling permitted in most states — Apr. 18, p. 27

Truck shipping is new era for oil transportation — Apr. 11, p. 28; Apr. 4, p. 25; Mar. 28, p. 28; Mar. 14, p. 27

1927

Developing driver for cheaper transportation — Dec. 14, p. 70

Truck trailers haul carload of gasoline — Nov. 23, p. 26

Lowering transportation costs with trucks — Oct. 26, p. 27

The above list of articles is for your convenience in locating them in your file.

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National Petroleum News

Main Office: 1213 West Third St.
Cleveland, Ohio

Crude Oil Prices (in Effect Feb. 11, 1929)

(Crude prices for the whole year in OIL PRICE HANDBOOK published annually)

GULF COASTAL

Prices of The Texas Co.

Effective March 14, 1927

Grades A	$1.20	*Grades B	$1.15
‡Grades B (light crude):			
35-35.9	$1.37	38-38.9	$1.43
36-36.9	1.39	39-39.9	1.45
37-37.9	1.41	40 and above	1.47

*Grades B include all heavy crudes which do not meet tests for Grades A or for Gulf Coast light crude.

‡The Texas Co.'s gravity and price schedule on all below 35° is same as Humble's postings on Grades B.

ROCKY MOUNTAIN FIELDS

Prices of Ohio Oil Co., and Midwest Refining Co.:

(Salt Creek prices effective Jan. 25, 1929)

‡Salt Creek 29-29.9	$0.90
" " 30-30.9	0.96
" " 31-31.9	1.02
" " 32-32.9	1.08
" " 33-33.9	1.11
" " 34-34.9	1.14
" " 35-35.9	1.17
" " 36-36.9	1.20
" " 37 and above	1.23
Elk Basin	1.36
Grass Creek light	1.36
Big Muddy	$1.28
Lance Creek	1.38
Rock Creek	1.18
Mule Creek	1.10
Rex Lake	1.10
‡Osage	1.38
‡Cat Creek, Mont	1.48
Sunburst, Mont	1.65
‡Hogback, N. Mex	1.53
Artesia, N. Mex	1.08

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

CALIFORNIA

***Standard Oil Co. of California**

Gravity	Signal Hill Seal Beach Alamitos Heights Huntington Beach	Inglewood Torrance	Olinda-Brea Canon Richfield	Athens-Rosecrans Dominguez	Whittier La Habra	Coyote Hills	Santa Fe Springs	Newhall McKittrick †Kern River	Midway, Sunset Buena Vista & Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Montebello	Kettleman Hills	*Santa Maria (Orcutt)	*Ventura Elwood Terrace
14–14.9	$ .70	$ .70	$ .70	....	$ .70	$ .70	....	$ .50	$ .50	$ .50	$ .50	$ .50	$ .70	....	$ .65	$ .70
15–15.9	.70	.70	.70	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
16–16.9	.70	.70	.70	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
17–17.9	.70	.70	.70	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
18–18.9	.75	.75	.75	....	.75	.75	....	.50	.56	.56	.56	.56	.70	....	.70	.75
19–19.9	.80	.80	.80	....	.80	80	....	.50	.62	.62	.62	.62	.75	$1.65	.70	.70
20–20.9	.85	.85	.85	....	.84	.84	....	....	.68	.68	.68	.68	.80	for	.70	.85
21–21.9	.89	.89	.89	....	.88	.88	.89	....	.74	.74	.74	.74	.85	55°	.86	.86
22–22.9	.93	.93	.93	....	.91	.91	.92	....	.80	.80	.80	.80	.90	gravity	.87	.87
23–23.9	.97	.97	.97	....	....	.94	.95	....	.85	.85	.85	.85	.95	and	.90	.90
24–24.9	1.01	1.01	1.01	1.01	....	.97	.98	....	.90	.90	.88	.88	.98	over	.94	.94
25–25.9	1.05	1.05	1.05	1.05	....	1.00	1.01	....	.95	.95	.91	.91	1.01	....	.98	.98
26–26.9	1.09	1.09	1.09	1.09	....	1.04	1.04	....	1.00	1.00	.94	.94	1.04	....	1.02	1.02
27–27.9	1.13	1.13	1.13	1.13	....	1.08	1.07	....	1.05	1.05	.98	.97	1.07	....	....	1.06
28–28.9	1.17	1.17	1.17	1.17	....	1.12	1.10	....	1.10	1.10	1.02	....	1.10	....	....	1.10
29–29.9	1.21	....	1.21	1.21	....	1.16	1.15	....	1.16	1.16	1.06	....	1.13	....	....	1.14
30–30.9	1.25	....	1.25	1.25	....	1.20	1.20	....	1.22	1.22	1.10	....	1.16	....	....	1.18
31–31.9	1.30	....	....	1.30	....	....	1.25	....	1.28	1.28	1.14	....	....	....	....	1.23
32–32.9	1.35	....	....	1.35	....	....	1.30	....	1.34	1.34	1.18	....	....	....	....	1.28
33–33.9	....	....	....	1.41	....	....	1.35	....	1.40	1.40	1.22	....	....	....	....	....
34–34.9	....	....	....	1.47	....	....	1.40	....	....	1.46	1.26	....	....	....	....	....
35–35.9	....	....	....	1.53	....	....	1.45	....	....	....	1.30	....	....	....	....	....
36–36.9	....	....	....	1.59	....	....	1.50	....	....	....	....	....	....	....	....	....
37–37.9	....	....	....	1.65	....	....	1.55	....	....	....	....	....	....	....	....	....
38–38.9	....	....	....	1.71	....	....	1.60	....	....	....	....	....	....	....	....	....
39–39.9	....	....	....	1.77	....	....	1.65	....	....	....	....	....	....	....	....	....
40–40.9	....	....	....	1.83	....	....	....	....	....	....	....	....	....	....	....	....
41–41.9	....	....	....	1.89	....	....	....	....	....	....	....	....	....	....	....	....
42–42.9	....	....	....	1.95	....	....	....	....	....	....	....	....	....	....	....	....

*Santa Maria and Ventura postings are by Union Oil Co. Union Oil Co. posts same prices in all above fields as Standard except in Montebello and Wheeler Ridge. Elwood Terrace is posted at same prices by Standard. Standard does not contract for crude testing 11-13.9 gravity, but pays 45c a barrel when purchased.

†Kern River down to 12° gravity is 50c; 11-11.9 is 45c.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders effective on the date shown.

Refiners' Supplies

	Feb. 11	Feb. 4
Soda Ash light 58% bags, cwt.	$1.32	$1.32
Silicate of Soda 60 deg. drums, cwt.	$1.55	$1.55
Silicate of Soda 40 deg. tank cars, cwt.	$0.60	$0.60
Silicate of Soda 40 deg. drums cwt.	$0.80	$0.80
Sal Soda wks.	$0.90-1.00	$0.90-1.00
Caustic Soda 76% solid, cwt.	$2.90	$2.90
Sulfuric Acid 60 deg. tank cars, f.o.b. shipping point per ton	$11.00	$11.00
Oleum 20%, fuming sulfuric, tank cars, wks.	$18.50	$18.50
Sulfur, flowers of, cwt.	$3.10-4.00	$3.10-4.00
Liquid Chlorine, tank cars, wks., lb.	3.00-4.50	3.00-4.50

Compounders' Supplies

	Feb. 11	Feb. 4
Vegetable Oils		
Linseed carloads, spot, lb.	10.20	10.10
Tanks, spot	9.30	9.20
Soya Bean, Tanks, coast, lb.	10.00	9.75
Oleic Acid		
Distilled, tanks, lb.	9.75	9.75
Distilled, bbls., lb.	10.75	10.50
Saponified, tanks, lb.	10.25	10.25
Saponified, bbls., lb.	10.75	11.00
Lard Oils		
Prime Winter Strained, lb.	15.75	15.50
Extra Winter Strained, lb.	13.75	13.375
Extra, lb.	13.50	13.00
Extra No. 1, lb.	13.25	12.75
No. 1, lb.	13.50	12.50
No. 2, lb.	12.75	12.25
Tallow oil, lb.	12.00	11.75
Neatsfoot Oil		
Pure, bbls., lb.	15.00	15.00
Extra, bbls., lb.	13.50	13.00
No. 1 bbls., lb.	13.25	12.75
Cold Pressed, lb.	18.75	19.00
Fish Oils		
Menhaden Oil		
Light Pressed, gal.	72-73	71–72
Light Pressed, tank cars, N.Y., gal.	65	65
White bleached, gal.	78-79	77
Yellow bleached, gal.	75-76	74
Whale, extra winter bleached, gal.	82	85
Naval Stores		
Steam distilled turpentine, N. Y., gal.	56	56
Steam distilled turpentine, Savannah, gal.	51	51
Gum turpentine, N. Y., gal.	58.50	59
Gum turpentine, f.o.b. cars Savannah, gal.	55	55
Wood Rosin F, N. Y., bbl.	$8.00	$8.00
Wood Rosin F, Savn'h, bbl.	$7.20	$7.20
Gum Rosin B, N. Y., bbl.	$8.00	$8.00
Gum Rosin B, f.o.b. cars Savannah, bbl.	$7.25	$7.30
Rosin oil, pure, gal.	62	62
Rosin oil, compounded, gal.	51	51
Pine Tar		
Kiln burnt, bbl.	$13.00-14.00	$13.00-14.00
Retort, bbl.	$13.50-14.50	$13.50-14.50
Alcohol		
Denatured, Formula 5, in bbls., per gal.	55-62	55-62

OIL STOCKS AND FINANCES

National Petroleum News

Investment Trust Earns Over 10%

NEW YORK, Feb. 11.—Oil Stocks, Ltd., one of the oil share investment trusts formed last spring, earned $455,031 in eight months last year or better than 10 per cent. It has issued the following balance sheet as of Dec. 31:

Assets

Cash	$55,031
Money on call	100,000
Stocks owned at cost*	4,210,117
Total	$4,365,469

Liabilities

Accounts payable	$2,938
Income tax reserve	50,000
Class A 240,000 shares	2,780,000
Class B 102,000 shares	1,120,000
Surplus	412,531
Total	$4,365,469

*Market value $4,742,883.

Tide Water Co. Answers Osage Complainants

NEW YORK, Feb. 9.—Tide Water Oil Co. in a letter to stockholders of the Tidal Osage Oil Co. writes that offers of two members of the Pittsburgh committee of three that seeks an inquiry into the affairs of the Tidal Osage, to sell their stock to the Tide Water were countered with offers of Tide Water to sell its majority interest in the company.

Tide Water says its offer was refused. It adds that all Tidal Osage dividends have been paid from surplus and undivided profits, and have not been capital disbursements.

Independent Oil & Gas Reports Larger Net

NEW YORK, Feb. 11.—Independent Oil & Gas Co. reports net profit of $2,953,885 after all charges, federal taxes and reserves in the fourth quarter of 1928. This sum includes the net profits of the Manhattan Oil Co. of Kansas City, and compares with a net of $2,445,854 net in the third quarter of 1928 which sum included the Manhattan earnings for only August and September.

The fourth quarter earnings were equivalent to $3.08 a share on the outstanding 959,457 no par shares.

Net profit for all of 1928, including the Manhattan for the last five months, amounted to $5.30 a share as compared with $4.62 a share in 1927 on 500,000 shares of stock then outstanding.

Financial Notes

National Refining Co.—All directors and officers were re-elected at annual meeting. Results for 1928 were reported to have been satisfactory but no statement was given out.

Beacon-Sun Oil Co.—Standard Oil Co. of California has completed El Mamon No. 1—A well on Beacon-Sun concession in District of Urumaco, state of Falcon, Venezuela at 3437 feet with initial production of 2100 barrels, of which 14 per cent is water. Sun Oil Co. and Beacon Oil Co. now controlled by the Standard Oil Co. of New Jersey own 50 per cent each of the Beacon-Sun.

STANDARD
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ISSUES

SOUTH PENN
OIL CO.

NEW STOCK
(WHEN ISSUED)

BOUGHT—SOLD—QUOTED

CARL H. PFORZHEIMER & CO.

Specialists in Standard Oil and Miscellaneous Oil Securities

25 Broad Street New York

A.P.I. Balance Sheet Revisions Printed

CLEVELAND, Feb. 11.—Revisions in the general balance sheet and income account and earned surplus analysis made by the Committee on Uniform Methods of Oil Accounting of the American Petroleum Institute to Dec. 31, 1928, have been included in a pamphlet of the whole balance sheet just published by the committee.

M. W. Mattison, chairman of the committee, announced that the charts of the income and cost and expense accounts and detailed schedules of fixed assets and reserve accounts relating thereto will be circulated to the industry this year.

Western Oil Offering Stock for Expansion

LOS ANGELES, Feb. 11.—Western Oil & Refining Co. has been authorized by the state corporation commissioner to sell 66,666 no par Class A common shares and 135,400 Class B no par common shares out of an authorized 1,000,000 shares of each class.

The company reports having marketed approximately 23,000,000 gallons of gasoline in 1928 as compared with 11,076,000 gallons in 1927. It also marketed 850,000 barrels of fuel oil, 150,000 barrels of diesel oil, and 3,500,000 gallons of kerosene.

During 1928 this company bought a half interest in the Olympic Refining Co. from the Dollar Steamship Co., the Big Five Oil Co. which had a 40-acre lease in the Rosecrans-Athens field, and the Buck Eye Oil Co. which had 500 barrels daily production. It is extending its pipe line in the Los Angeles basin and expanding its refining and marketing facilities.

Richfield Oil Co.—John McKeon, a vice-president, has resigned to resume activities as an Independent oil operator. He was in charge of production for Richfield.

Cities Service Co.—Net to stocks and reserves in 1928 amounted to $29,649,959 as compared with $29,412,932 in 1927. Net to common stock and reserves was $22,876,755 in 1928 and $22,604,926 in 1927.

Above—*A—Flexible metal tube; B — Celinol sealing layer; C — Jacket, made of hard twisted yarn woven tightly to prevent absorption of water and oil. Pre-shrunk to prevent loosening*

The Gasoline test tells the story of the superiority of Goodrich Gasoline Hose. See below

A simple test that shows why Goodrich hose stays gasoline-tight

THE metal tubing of gasoline hose cannot be made gasoline-tight. For that reason a need has existed for a sealing layer to surround the metal tubing, that would not dissolve in gasoline. This need has been responsible for one of Goodrich's most important contributions to hose manufacture—Celinol.

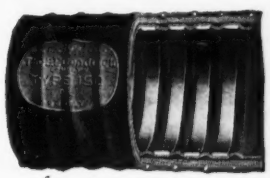
Where the sealing layer of ordinary hose is quickly dissolved by gasoline, becomes pulpy and loses its elasticity and gasoline-tightness, Celinol is immune to the solvent effects of gasoline, and keeps its tensile strength fifty percent longer.

The effect of this improvement on hose replacement costs is readily apparent.

The superiority of Celinol is so marked that we want you to prove it to yourself by this simple test. Take a small section of Celinol sealing layer and put it in a bottle filled with gasoline. Take a small section of ordinary rubber and put it in another bottle. Leave both samples immersed for sixty days. At the end of that time you will see that Celinol still retains its toughness and elasticity whereas the other rubber has become gummy, has lost its resiliency, and has discolored the gasoline.

We will gladly send a small sample of Goodrich Celinol so that you can make this test yourself. Write to The B. F. Goodrich Rubber Co., Akron, O., or send the coupon below.

Oil Suction and Discharge Hose



Scientifically balanced combination of wire, fabric and oil-proof rubber. Also made with reinforced cover and ends for sea-loading service. Dock records of leading oil companies show this hose outlasts other makes 25% to 50%.

Goodrich Distillate Hose

For conducting fuel oil. The oil proof tube and cover are the result of years of chemical research work. This hose contains no metal. Light and flexible. Furnished in long lengths. Sizes—1", 1¼", 1½", and 2".

The Goodrich Guarantee

Every hose is guaranteed against any defect in material or workmanship for 24 months — a copy of the guarantee is attached to every length before it leaves the factory.

Goodrich

NPN-1

THE B. F. GOODRICH RUBBER CO.,
Akron, Ohio

Gentlemen: Please send me a small sample of Celinol sealing layer so that I may test its superiority myself.

Name .....

Firm .....

Address .....

Transactions in Oil Shares on New York Stock Exchange

1927 High	1927 Low	1928 High	1928 Low		Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Sales	Week Ended Feb. 9 First	High	Low	Last	Change
37⅞	27⅜	43⅞	27⅛	(sh)	922,075	N.P.	Amerada Corp.	50cQ	Jan 31, 29						
82½	35⅛	85	51¼	(sh)	209,180	N.P.	American Republics Corp.			4,600	55⅞	56	48½	50	— ⅝
50¼	35	53⅜	37½		$56,000,000	$ 25	Associated Oil	50cQ	Dec. 31, 28	380	46	46	45½	46	0
		65⅝	50		50,000,000	25	Atlantic Refining (New stock)	25cQ	Dec. 15, 28	81,000	60⅞	61	55⅛	55⅞	— 5⅛
119	115¼	118¼	114½		20,000,000	100	do pfd	$1.75Q	Feb. 1, 29	70	116¼	116¼	115½	115½	— 1½
35½	20¾	53	20		30,971,225	25	Barnsdall Corp. A	50cQ	Feb 5, 29	110,100	45⅞	45⅞	40½	40⅝	— 5⅛
32½	20½	51⅛	20		581,850	25	do B	50cQ	Feb. 5, 29	1,100	46¼	46¼	40½	42	— 7
18¼	14	28½	12¼		946,518	N.P.	Beacon Oil			8,900	21¾	21⅞	20	20	— 2
32⅞	20	36	24		51,524,150	25	California Petroleum	25cQ	Jan. 1, 29	20	28	28	28	28	— 1⅞
96¾	65	94⅞	68		20,980,400	100	General Asphalt			7,900	74	75	70¼	70¾	— 3⅝
144⅛	107¼	141½	110⅛		6,662,200	100	do pfd	$1.25Q	Dec. 1, 28	900	115	115	111⅝	111⅝	— 2⅜
175¾	60⅛	167	79		25,000,000	100	Houston Oil			3,400	87	93	83	83	— 5
32¾	17⅝	38⅜	21¾	(sh)	659,000	N.P.	Independent Oil & Gas	37½cQ	Jan. 31, 29	22,700	31½	32⅛	30½	30½	— 1
12⅛	7⅛	39⅜	9		$3,582,670	$ 10	Indian Refining		Dec. 15, 20	36,600	36⅞	36⅞	32	32¼	— 3⅝
12	7¼	38¾	8¾		4,550,110	10	do ctfs.			17,200	36	36	31⅜	31½	— 4½
112	99	185	40		2,296,400	100	do pfd. new	$1.75Q	Jan. 2, 29						
37¾	20½	39½	27⅜	(sh)	3,992,234	N.P.	Lago Oil & Transport	75cQ	Nov. 1, 28	2,500	29	29	27½	27½	— 1½
18⅝	10	19¾	9⅜	(sh)	1,187,003	N.P.	Louisiana Oil Refining			15,500	15⅜	15½	13⅞	14	— 1½
97	85¾	96	78		$4,000,000	$100	do pfd	$1½Q	Feb. 15, 29	20	89½	89½	89	89	— 1½
22¾	12	25¼	12½	(sh)	330,000	N.P.	Maracaibo Oil			1,100	15	15	13½	14	— 1
58½	31	49¾	33	(sh)	2,316,851	N.P.	Marland Oil Co.		Mar. 31, 27	43,700	40	40⅜	36⅝	37¼	— 3⅛
320	200	360	250		$45,942,800	$100	Mexican Petroleum	$3Q	Jan 20, 29						
					12,000,000	100	do pfd.	$2Q	Jan. 20, 29						
9¼	3	73	4⅝	(sh)	995,500	N.P.	Mexican Seaboard		Nov. 15, 24	63,700	53	53	43	43½	— 9½
39⅝	25½	44½	25⅛	(sh)	1,857,461	N.P.	Mid-Continent		Aug. 1, 27	32,200	33½	33¾	31⅛	31½	— 1⅝
105	97	121	103¼		$6,718,000	$100	do pfd	$1.75Q	Dec. 1, 28	200	120⅝	120⅝	120½	120½	— ⅛
3¾	1⅝	7⅜	2⅜		24,060,470	10	Middle States		July 1, 23	15,400	4¼	4¼	4	4	— ¼
2¾	1⅜	5⅞	1½		5,739,750	10	do ctfs.			2,200	3	3⅛	2¾	2¾	— ¼
1⅞	1	2¼	1	(sh)	3,500,000	N.P.	Pacific Oil			9,600	1¼	1¼	1⅛	1⅛	0
65⅞	40⅜	55½	38¼		$50,000,000	$ 50	Pan American P. & T.		Oct. 20, 27	2,200	43½	43½	41½	42	— 1½
66¾	40¼	58⅞	37¾		121,100,000	50	do B		Oct. 20, 27	35,600	44½	45	41⅝	41⅝	— 3¼
37⅞	16¾	28⅜	15½	(sh)	400,000	N.P.	Pan American Western B.		Jan. 30, 27						
18⅞	8	21¾	11½	(sh)	199,370	N.P.	Panhandle P. & R.			4,900	11	11	9⅝	9¾	— ¾
83	54	106¼	70		$2,935,200	$100	do pfd		July 2, 23						
60¼	36¼	53⅞	35¼	(sh)	2,406,796	N.P.	Phillips Petroleum	‡37½cQ	Jan. 2, 29	19,100	40	40⅛	37¾	38	— 2
1⅜	½	5¼	½		$29,622,925	$ 25	Pierce Oil			11,200	2½	2⅝	2¼	2¼	— ¼
24	13½	50	16¼		15,000,000	100	do pfd		Feb. 1, 22	800	32	32	30	30¼	— 1½
5½	2½	6⅝	3½	(sh)	2,500,000	N.P.	Pierce Petroleum			9,100	5	5⅛	4¾	4¾	— ¼
		65	59¼		$65,575,000	$ 25	Prairie Oil & Gas		Aug. 31, 27	49,800	60¼	62½	†59	59¼	— 1⅛
					101,250,000	$ 25	Prairie Pipe Line			21,100	58¾	*58⅞	†56	56	— 3
33⅞	16¾	29⅞	16		$37,450,850	$ 50	Producers & Refiners		Sept. 15, 23	1,100	21¾	21¾	19¾	19¾	— 1¼
50	36⅞	49⅜	41		2,845,350	50	do pfd		May 1, 25	30	40⅛	40⅛	†40	40	0
33½	25	31¼	19		75,952,250	25	Pure Oil Co.	25cQ	Dec. 1, 28	29,100	25	25⅞	23¾	23¾	— 1
115½	111⅛	119	108		13,000,000	100	do 8% pfd	$2Q	Jan. 2, 29	310	113¼	113¼	112	112	— 1¼
28⅝	25⅜	60	23½		$43.764,450	$ 25	Richfield Oil	50cQ	Feb. 15, 29	19,100	44⅝	44⅞	41½	42⅞	— 2⅝
					1,200,000	N P.	Rio Grande Oil Co.			61,000	40¾	*40¾	†36	36¼	— 3⅞
54½	44¼	64	44⅝	(sh)	585,293	13.40	Royal Dutch N. Y. shares	$1.336	Feb. 8, 29	6,100	51⅜	51⅝	50¼	50¾	— ¾
47⅞	41⅜	57½	39⅜	(sh)	67,300	L2	Shell Transport & T.	$1.455	July 23, 28						
31¾	24⅝	39⅜	23¼	(sh)	10,000,000	N.P.	Shell Union Oil	35cQ	Dec. 31, 28	42,100	27¼	27½	26	26¾	— 1⅜
26⅜	14¼	27¼	18½		$7,208,080	$ 10	Simms Petroleum	40c	Dec. 15, 28	6,100	20⅞	21	19⅜	19¾	— 1
22⅜	15	46¾	17⅜	(sh)	4,503,031	N.P.	Sinclair Consolidated		May 31, 24	212,100	39¼	40	36	36¾	— 2½
104½	97	110	102½		$16,310,100	$100	do pfd	$2Q	Feb. 15, 29	400	109⅞	109⅞	109¾	109¾	+ 1⅝
37⅝	24⅛	42⅝	25		27,396,590	25	Skelly Oil Co.	50cQ	Dec. 15, 28	29,100	35⅛	35⅝	33⅜	34¼	— 1¾
60¾	50⅜	80	53	(sh)	13,016,434	N.P.	S. O. California	‡62½cQ	Dec. 15, 28	29,100	66⅜	68⅞	65⅝	66¼	— ⅛
41⅜	35⅛	59⅜	37¾		$610,195,375	$ 25	S. O. New Jersey	‡25cQ	Dec. 15, 28	7,110	50¼	50¼	48⅜	48⅝	— 1⅞
34½	29¾	45⅞	28⅝		431,973,275	25	S. O. New York	40cQ	Dec. 15, 28	112,100	41¼	41½	39⅞	40	— 1½
34⅞	30	77	31½	(sh)	1,300,532	N.P.	Sun Oil	‡25cQ	Dec. 15, 28	4,900	60	61	58	58	— 3
101⅝	99	110	100		$5,000,000	$100	do pfd	$1.50Q	Dec. 1, 28	50	105⅜	105⅜	104⅝	104⅝	+ ⅝
6½	3⅛	14¼	2⅛	(sh)	1,186,078	N.P.	Superior Oil Corp.		Dec. 20, 20	31,100	8¾	8⅞	7½	7⅝	— 1⅛
58	45	74¾	50		$210,577,050	$ 25	The Texas Corp.	75cQ	Jan. 1, 29	52,100	61¾	61¾	59	59⅛	— 2⅜
18⅞	12	26⅝	12⅛		8,380,340	10	Texas Pacific Coal & Oil		Jan. 3, 28	61,100	19	20¼	17⅜	17⅝	— 1
29⅛	19	41½	19⅝	(sh)	2,168,498	N.P.	Tide Water Oil Co.	20cQ	Dec. 31, 28	2,600	30½	30½	27⅛	27⅛	— 2⅞
90¼	85	100⅛	86¾		$20,705,200	$100	do 5½% pfd	$1.25Q	Feb. 15, 29	600	92¾	92¾	92	92	— 1¼
19¼	15¾	25	14¾	(sh)	4,824,766	N.P.	Tide Water Associated		Aug. 1, 27	9,600	19	19½	17½	17⅞	— 1⅛
90¾	85	91¾	81⅞		$72,745,958	$100	do pfd	$1.50Q	Jan. 2, 29	14,100	87¼	87¾	87	87	0
10⅝	3¾	14½	6¾	(sh)	3,842,029	N.P.	Transcontinental Oil			31,400	10⅜	10½	9½	9½	— ⅞
56½	39⅛	58	42¾		$40,841,100	$ 25	Union Oil of California	50cQ	Feb. 10, 29	15,600	49½	50⅞	49⅜	49⅜	— ⅝
127½	94	133½	110		31,061,200	100	Union Tank Car Co.	$1.25Q	Dec. 1, 28	4,100	131	137	130	137	+ 3
34½	24½	44⅞	26	(sh)	357,197	N.P.	Warner Quinlan	50cQ	Jan. 2, 29	8,800	37⅝	38⅜	35⅝	35⅝	— 2⅛
27½	20	38	20⅛	(sh)	490,000	N.P	White Eagle Oil & Refining	50cQ	Jan. 20, 29	82	32½	32½	30½	32¼	— ⅛
		22⅞	18⅛	(sh)	418,967	N.P.	Wilcox Oil & Gas		May 10, 28	79,600	26⅞	29¾	25	25	— 1½

•New High †New Low ††Ex-dividends ‡Also extras s-Stock Total Sales 1,505,372

Pittsburgh Stock Exchange

Transactions Week Ended Feb. 8, 1929

	Sales	High	Low	Last	Ch'ge
Ark. Nat. Gas	9,220	4¼	4	4	0
do pfd	3,154	8¼	8⅛	8⅛	— ⅛
Devonian Oil	130	7	7	7	0
Dixie Gas & Util.	8,686	13½	10	13½	+3½
Lone Star Gas	3,615	†75	72	72	—1½
Plymouth Oil	185	28	27	27	—1
Pitts. Oil & Gas	300	4¼	4	4	— ¼
Salt Creek Cons.	335	5¾	5½	5½	— ¼

†New High.

Pittsburgh Curb Market

Transactions Week Ended Feb. 8, 1929

	Sales	High	Low	Last	Change
Leonard Oil & Dev.	1000	5	5	5	— ½

Financial Notes

Vacuum Oil Co.—Stock placed on $4 annual dividend basis with declaration of $1 quarterly dividend payable March 20 to stock of record Feb. 28. This is equivalent to $8 a share a year on the old stock that was outstanding before the 100 per cent stock dividend last year.

American Maracaibo Co.—Drilling on this company's Venezuelan concessions is to be undertaken, J. J. Cotter, president, announced at the annual meeting. The company has completed a 3000-barrel producer in the Hendricks pool, Winkler county, Texas, he announced.

South West Pennsylvania Pipe Lines—Annual meeting will be held Jan. 23 at Oil City, Pa.

Oil Dividends

	Amount	Payable	Stock of Record
Ohio Oil q.	50c	Mar. 15	Feb. 15
Simms Petroleum q.	40c	Mar. 15	Feb. 28
S. O. California q.	62½c	Mar. 15	Feb. 18
S. O. Indiana stock	50%		Feb. 16
do q.	62½c	Mar. 15	Feb. 16
do extra	50c	Mar. 15	Feb. 16
S. O. Nebraska q.	62½c	Mar. 30	Feb. 25
do extra	25c	Mar. 20	Feb. 25
S. O. New York q.	40c	Mar. 15	Feb. 15
Sun Oil q.	25c	Mar. 15	Feb. 25
Union Tank Car q.	$1.25	Mar. 1	Feb. 16
Vacuum Oil q.	$1	Mar. 20	Feb. 28
Cumberland P. L. q.	$1	Mar. 15	Feb. 28
do extra	$4	Mar. 15	Feb. 28

Cleveland Stock Market

February 8	Par Value	Bid	Asked
Canfield Oil Co.	$100	140	148
do pfd.	100	103	
Fred G. Clark	10	8	9½
National Refining	25	35	37¾
do pfd.	100	134	139
Paragon Refining	25	25	25¼
do pfd.	N.P.	42	43⅜
do ctfs. of deposit		25⅛	26

"Fill 'er up brother"

THAT'S another big reason for going out after coupon book business. Patrons order generously.

And people *prefer* coupon books, once they try them. Handy as a check book. Easier than making change. No bothersome waiting.

Coupon books increase any station's business. Because their owners buy *oftener*—drive out of their way to go where their coupons serve as cash.

Hundreds of companies both large and small, big users like Sinclair, Texas, Standard and Associated Oil, specify *Rand McNally* Coupon Books.

Because they're sure of getting better quality printing, guaranteed numbering, certified count, quicker deliveries—as well as the savings that our huge production makes possible.

We carry special and stock designs for companies desiring to install the coupon book system.

Before placing any order, wire or write for samples and prices.

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SPECIALISTS IN COUPON BOOK PRINTING

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and Steel Buildings

We manufacture the simplest to the most elaborate Stations. Put your own individuality in your Filling Stations—Let us help you work this out.

The Edwards Manufacturing Co.

524-544 Eggleston Ave. **Cincinnati, Ohio**

In the Oil Industry

NORTHERN DOUBLE PACKED VALVES
BALANCED - LUBRICATED
CAN'T STAY STUCK - CAN'T KEEP LEAKING

The Northern Double Packed valve is a Plug Type Quick Operating valve of high quality. The extension of the plug down through a stuffing box in the bottom of the valve makes the Northern truly a "Valve That Can't Stay Stuck". Available in all sizes, weights, styles and materials.

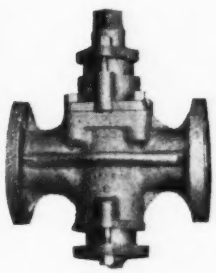

Plate 3
Double Guard Type

Here are two of the Northern Valves which are most useful in the Oil Industry. The Double Guard type—(Plate 3)—is made regularly in Cast Steel—and is for Hot Oil. The Steam Jacketed type (Plate 4)—is excellent where a "Hot" Valve is needed—such as in Asphalt and Tar lines.

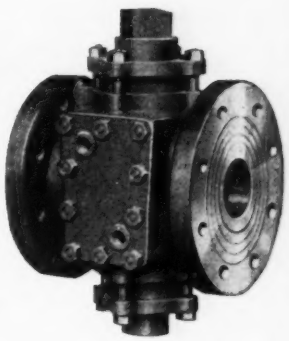

Plate 4
Steam Jacketed Type

NORTHERN PUMP CO.

MINNEAPOLIS, MINN.

OFFICES IN ALL PRINCIPAL CITIES

Standard Oil Stocks on New York Curb

1927 High	1927 Low	1928 High	1928 Low	Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended Feb. 8 Sales	First	High	Low	Last	Change
21⅝	17⅞	22⅜	14⅞	L 4,126,460	L 1	Anglo-American Oil	24.4c	June 6, 28	5,600	15⅜	16⅜	15¼	16	+ ¾
21½	17⅝	20½	14⅜	.....	L 1	do cts. non-voting	.....	.....	1,300	14⅞	16¾	14⅞	15½	+ ⅛
3¾	¾	5	1¼	(sh) 500,000	N.P.	Atlantic Lobos	.....	.....	400	2	2⅛	2	2⅛	0
6½	2½	9¾	3¼	$ 10,000,000	$ 50	do pfd	.....	.....	200	4	4	3⅞	3⅞	— ⅛
69	50	56	44½	1,000,000	25	Borne-Scrymser	‡$1S.A.	Oct. 15, 28	150	45⅜	46	45⅜	46	+ 2½
60	45	76	58	10,000,000	50	Buckeye Pipe Line	$1Q	Dec. 15, 28	400	70	70	70	70	— 1
126	76½	161	117¼	3,000,000	25	Chesebrough Mfg	‡$1Q	Dec. 28, 28	100	142	142	142	142	— 1
22⅝	16¼	23	16	36,123,350	10	Continental Oil	.....	Dec. 15, 27	111,000	23½	23⅞	20⅜	21½	— 1⅛
14⅞	9½	17½	9½	.....	N.P.	Creole Petroleum	.....	.....	14,200	9¾	10	9¼	9½	— ⅛
137	89	114	67	1,500,000	50	Cumberland Pipe Line	$1Q	Dec. 15, 28	550	72¾	74	70	72¾	+ 5¾
68½	47	88	64⅛	5,000,000	100	Eureka Pipe Line	$1Q	Feb. 1, 29	50	69	69	69	69	— 1¼
13½	3½	13	4¼	16,000,000	100	Galena Signal Oil	.....	June 30, 25	.....	.....	.....	.....	.....	.....
59¾	23	87¾	27	4,000,000	100	do new pfd	.....	June 30, 26	20	90	90	90	90	+ 5
60⅛	35½	89¾	35	2,000,000	100	do old pfd	.....	June 30, 26	350	84⅛	85	83	85	+ 3
68½	54	114¾	59¼	73,685,700	25	Humble Oil & Refining	‡30cQ	Jan. 2, 29	32,400	94	94	91½	92⅛	— 1⅛
182	123¾	290½	176½	20,000,000	100	Illinois Pipe Line	$10S.A.	Dec. 15, 28	400	305	305	299	299	— 5½
64¾	37¾	104	56¾	(sh) 6,591,458	N.P.	Imperial of Canada	‡25cQ	Dec. 1, 28	6,800	97	97⅜	94	94	— 3½
94½	61	91⅞	74⅞	$ 5,000,000	$ 50	Indiana Pipe Line	‡$1Q	Feb. 15, 29	1,400	87	87	82	82	— 5
39	28¼	55	35	(sh) 7,123,544	N.P.	International Petroleum	25c	June 30, 28	48,500	60½	60½	53¾	54¾	— 5½
24	13¼	32⅜	19⅜	6,363,350	12.50	National Transit Co	25cQ	Dec. 15, 28	5,100	24	25⅜	24	24½	+ ⅜
44½	31¼	75	38½	5,000,000	100	New York Transit	.....	July 15, 26	200	80	81	80	80	— 1
100	70	69	56½	2,000,000	50	Northern Pipe Line	$2S.A.	Jan. 2, 29	.....	.....	.....	.....	.....	.....
67⅞	52	83½	58	60,000,000	25	Ohio Oil Co	50cQ	Dec. 15, 28	2,000	69¼	69¼	65⅜	65⅜	— 3⅞
39	12	84	28	10,000,000	25	Penn Mex. Fuel	$75c	Dec. 16, 28	700	41⅞	41⅞	36	36	— 7⅜
201½	175½	216	167	4,000,000	100	Solar Refining	$5S.A.	Dec. 20, 28	200	50	50	50	50	0
27¼	15½	35⅞	12	1,000,000	10	Southern Pipe Line	$2	Dec. 1, 27	.....	.....	.....	.....	.....	.....
41½	35	71⅞	36¾	20,000,000	25	Southern Penn Oil	‡50cQ	Dec. 31, 28	1,000	65	65½	63	64⅜	— ⅞
83	55½	100¾	70	3,500,000	100	South West Pa. Pipe Lines	$1Q	Oct. 1, 28	150	70	70	68¼	68¼	0
81½	64⅜	95⅞	70⅞	230,788,513	25	S. O. Indiana	‡62½cQ	Dec. 15, 28	281,700	95	102	91½	92¾	— ⅛
20⅞	14⅜	27¾	15	8,000,000	25	S. O. Kansas	.....	June 16, 24	1,000	19¾	19⅞	19⅛	19⅛	— ⅜
130	111½	179¾	122¼	17,103,011	25	S. O. Kentucky	‡$1Q	Dec. 31, 28	13,700	43¾	44⅜	40	40¾	— 2⅝
49½	40	54⅞	39⅞	4,601,100	25	S. O. Nebraska	‡62cQ	Dec. 20, 28	700	46	49⅛	45½	47⅞	+ 1⅛
87½	72	134	71	14,000,000	25	S. O. Ohio	62½cQ	Jan. 2, 29	550	121	121	115	115	— 9½
122	117¼	125	116	7,000,000	100	do pfd	$1.75Q	Dec. 1, 28	200	122	122	122	122	0
21	14½	23½	16	861,466	25	Swan Finch Co	30c	Jan. 15, 29	.....	.....	.....	.....	.....	.....
...	...	111	72	126,154,100	25	Vacuum Oil	‡75cQ	Dec. 20, 28	10,300	123	123	117⅛	117¾	— 5¼

*New high †New low xEx dividend ‡Also extras (a) $50 Special Sept. 1, 1928

Independent Oils on New York Curb

1927 High	1927 Low	1928 High	1928 Low	Par Value	Stocks	Transactions Week Ended Feb. 8 Sales	First	High	Low	Last	Change
2⅞	.55	1½	.53	$ 5	Amer. Con. Oilfields	12,500	60	65	60	62	+ 1
7½	2¾	9½	3⅛	N.P.	Amer. Maracaibo	18,300	7¼	7½	6⅝	6⅝	— ⅝
2⅝	1	4½	2¼	$ 10	Argo Oil	1,400	2½	2½	2½	2½	0
9¾	6¾	10¼	3⅜	10	Arkansas Nat. Gas	2,400	4⅜	4⅜	4⅛	4¼	0
....	....	29⅜	3⅞	....	Barnsdall deb. war	....	....	....	....	....	....
40	20½	55	29⅞	N.P.	British American	....	....	....	....	....	....
28¼	15½	23⅞	3¾	25c	Carib syndicate N	800	3¼	3½	3¼	3¼	— ⅛
58¾	40¼	90⅞	54	$ 20	Cities Service	85,400	91⅝	95¼	91⅝	95¼	+ 3½
95⅛	87	103½	94½	100	do pfd	1,800	96⅜	97½	96⅜	97¼	0
8⅞	7⅛	9⅝	8⅞	10	do pfd. B	400	9	9⅛	9	9	0
29¼	22½	....	28¼	10	do banker's shares	....	....	....	....	....	....
3⅞	1⅜	2¼	1	1	Colombia Syndicate	8,200	1½	1½	1⅜	1⅜	— ⅛
....	....	17¼	9¾	....	Colon Oil	7,500	12	12¼	11	11	— ¼
9¾	6⅛	8⅛	6¼	10	Consolidated Royal	1,800	8½	8½	8	8	— ¼
3	.50	3¼	.76	N.P.	Crown Central	1,300	1⅜	1⅜	1⅛	1⅜	+ ⅛
....	....	15	6¾	....	Crystal Oil	....	....	....	....	....	....
....	....	58	48	....	do pfd	....	....	....	....	....	....
12	4	33¾	8⅛	N.P.	Darby Petroleum	3,600	25⅜	25⅜	24	24	— 1⅜
11⅛	4	13½	7⅞	....	do trust ctfs	....	....	....	....	....	....
2½	.74	2⅞	1	N.P.	Derby Oil & Refining	100	3½	3½	3⅜	3⅜	0
16⅝	4	21⅛	7½	N.P.	do pfd	200	25½	25½	25	25	— 2½
3¾	1	2	1	N.P.	Gibson Oil	.....	.....	.....	.....	.....	.....
2	.40	.53	.15	N.P.	Gilliland ctfs	....	....	....	....	....	....
118	86¼	165	101¼	$ 25	Gulf Oil Corp	12,800	152¾	153⅜	145	145	— 8
2½	.80	3⅜	1	10	Intercontinent Pet	22,400	2⅛	2¼	1⅞	1⅞	— ⅛
2¼	1⅜	3	1¼	N.P.	Kirby Petroleum	2,600	2	2⅜	1⅞	1⅞	— ⅜
10⅞	5⅛	9⅜	5⅛	N.P.	Leonard Oil & Dev	2,300	5	5⅛	5	5	0
27½	20	43¾	20	N.P.	Lion Oil & Refg	1,800	32	32	30	30	— 2
59⅜	37	69⅛	48⅛	$ 25	Lone Star Gas	2,800	74⅛	74⅞	73	73⅜	+ ⅞
2⅞	.80	1⅞	.50	1	Magdalena Synd	8,000	81	85	72	80	0
21½	20⅞	22⅛	22⅛	N.P.	Manhattan Oil	....	....	....	....	....	....
52	12	45	34	N.P.	Margay Oil	100	33	33	33	33	— 3
3	1½	40½	40½	$ 10	Mexican-Panuco	....	....	....	....	....	....
12⅛	5	8	2¾	N.P.	Mexico-Ohio Oil	1,000	5½	5½	5	5	— ½
1½	1	1¾	.76	$ 1	Mountain & Gulf	3,000	1½	1½	1¼	1¼	— ¼
29¼	22¾	25⅝	19½	10	Mountain Producers	2,400	19⅝	20	19	20	+ ⅜
5⅞	4⅜	5⅝	4½	5	New Bradford	1,200	4⅜	4¾	4⅜	4⅜	— ⅛
6¼	4	5½	2¾	10	New England Fuel	500	3¼	3¼	3¼	3¼	0
16	9¼	11⅜	7⅛	1	New Mex. & Ariz	900	7⅝	7⅝	7½	7½	0
13⅞	9	15½	11½	25	New York Oil	....	....	....	....	....	....
....	....	40	39⅛	....	North Amer. Oil Cons.	....	....	....	....	....	....
12¾	9½	13¼	9	N.P.	North Cent. Texas	800	10⅞	11	10⅜	10⅜	— ⅛
....	....	....	....	N.P.	Oil Stocks, Ltd A	....	....	....	....	....	....
....	....	....	....	N.P.	do B	....	....	....	....	....	....
9⅜	3¼	6	2¼	N.P.	Pandem	800	2	2⅛	2	2	0
12⅝	7	15⅝	8½	N.P.	Panapec Oil	7,000	8½	8⅞	8¼	8¾	0
9	7⅝	20	10⅝	$ 25	Paragon Refg. B ctfs	....	....	....	....	....	....
.37	.25	9	4	N.P.	Peer Oil Corp	....	....	....	....	....	....
13½	5⅜	7¾	4⅞	10	Pennok Oil	5,000	6¼	6¼	6¼	6¼	— ⅛
....	....	....	....	N.P.	Petroleum Corp	....	....	....	....	....	....
....	....	5⅜	3⅛	5	Pittsburgh Oil & Gas	....	....	....	....	....	....
....	....	31⅜	26½	....	Plymouth Oil	400	29½	28¼	26⅞	26⅞	— ⅞
24⅜	7	18	8	25	Red Bank Oil	800	12¼	13	12	12	0
15½	3½	13	4⅛	N.P.	Reiter-Foster	1,800	5⅛	5½	5	5	0
28⅜	15	25½	22	$ 25	Richfield Oil pfd	600	24½	24⅜	24½	24½	0
....	....	23	7½	....	do warrants	....	....	....	....	....	....
7	4½	12	4⅝	N.P.	Ryan Consolidated	700	9	9	8	8¼	— ⅛
8	5¼	7¼	5⅝	$ 10	Salt Creek Cons	600	5½	5½	5½	5½	0
35½	27¼	35	23¼	10	Salt Creek Prod	6,300	23¾	24⅜	22¾	23⅞	+ ⅜
7	1¾	3½	1	5	Savoy Oil	100	1⅜	1⅜	1⅜	1⅜	0
....	....	4⅝	3	N.P.	Texon Oil & Land	2,800	20	20⅛	19	19	— 1½
26½	17	22⅞	13	10	Tidal Osage	400	14	14⅜	13½	13½	— ¾
23¾	15	21¼	13⅛	10	do non-voting	1,100	11	13⅝	11	11¼	+ ¼
92	63½	93¾	75	100	Transcontinental pfd	100	83	83	83	83	— 2½
23¼	7	74¼	18	10	Venezuela-Mexico	....	....	....	....	....	....
7⅝	4¼	9⅛	4¾	5	Venezuelan Petrol	3,100	5¼	5¼	5	5	— ⅛
8	4¾	8¼	4⅞	$ 1	Woodley Petroleum	4,300	7⅞	8⅜	7⅛	7¼	0
6	1¾	8⅜	2⅛	25	Y Oil & Gas (new)	1,800	4	4½	4	4	— ½

*New High †New Low x Ex Dividend

New York Curb Bonds

Week Ending Feb. 8

	High	Low	Last	Ch'ge
Beacon Oil 6s '36	113	112¾	112¾	— ¼
Cities Service 5s '66	90¼	89⅜	90¼	+ ¼
Cities Serv. G 5½s '42	90⅝	90	90¼	+ ¼
Cities Serv. P. 5½s '57	96⅝	95½	95½	—1⅛
Cont. Oil 5½s '37	94½	94	94½	— ¼
Empire O & R 5½s '42	90½	90	90½	+ ½
Galena Oil 7s '30	101	101	101	0
Gulf Oil 5s '37	100	100	100	— ¾
Gulf Oil 5s '47	100⅝	100⅛	100⅛	— ⅝
Indepdent Oil 6s '39	106	102½	104⅛	—1⅜
Richfield Oil 5½s '31	100⅝	100	100¼	—1⅛
Sun Oil 5½s '39	101½	101	101	0
Valvoline Oil 7s '37	106	106	106	0

New York Bonds

Week Ending Feb. 8

	High	Low	Last	Ch'ge
Assoc. Oil gold 6s	103	102½	102½	0
Atlantic Refg. deb. 5s	101	100	100⅛	— ⅞
Atlantic Refg. 6s ex-war.	100	99¾	99⅞	— ⅛
Cal. Pet. 5s	101	100	100	— ½
Cal. Pet. 5½s	102⅝	102½	102¾	+ ¼
General Asphalt 6s	106	106	106	—1
General Pet. 5s	101½	101⅛	101½	+ ⅞
Humble Oil & Refg. 5s	100	99½	100	0
Humble Oil & Refg. 5½s	101⅝	101⅜	101½	0
Mid-Cont. Pet. 6½s	104½	104	104½	— ½
Pan Amer. P & T 7s	104½	104½	104½	0
Pan Amer. P & T 6s	103¾	103	103	— ⅜
Pan Amer. P. & T. 6s	96½	96	96⅛	+1
Phillips Pet. 5¼s	92½	91¾	92	— ⅜
Prod. & Refg. 8s ex-war.	111¾	111¾	111¾	0
Pure Oil 5½s	99¼	98½	98½	— ½
Shell Union Oil 5s	96⅞	96¼	96½	— ½
Sinclair Con. Oil 7s	103½	102¼	103	+ ¾
Sinclair Con. Oil 6½s	100	101	100½	— ⅛
Sinclair Con. Oil 6s D	99¾	99½	99½	0
SinclairCon.OilCrude5½s	97¼	95¾	97	+ ¾
Sinclair Pipeline	95	93¼	95	+1⅛
Skelly Oil 5½s	93¾	92¼	92½	+ ½
S. O. N.-Y. 4½s	96⅞	95¾	96⅜	+ ⅜
S. O. N. J. 5½s	102⅞	102	102	— ¾
Union Oil of Calif. 6s A	109	108⅞	108⅞	0
Union Oil of Calif. 5s C	99	98¼	98¼	+ ⅛
White Eagle Oil 5½s	101⅝	99⅞	99⅞	—1⅛

Three California Companies Merge

LOS ANGELES, Feb. 7.—The Gilmore Oil Co., Bolsa Chica Oil Corp., and E. J. Miley Oil Co. have been merged into the Gilmore Consolidated Oil Corp. Oscar Howard is chairman of the consolidated company and W. H. Meblett is president.

Besides these two men, members of the board of directors are: Clarence Beesemeyer, H. H. Cotton, C. Delorme, J. B. Elliott, R. E. Fisher, William Ford, Earl Gilmore, James Irving, E. J. Miley, Philip C. Salterbach, William H. Thomas, and Joseph J. Tynan.

Financial Notes

(*Continued from Page* 148)

Pan American Western Petroleum Co.—This company netted $100,825 in the third quarter of 1928, it has just reported. This is 20 cents a share on the 100,010 shares of no par class A stock and 400,000 shares of no par class B stock. In the third quarter of 1927 the company netted $273,942 or 54 cents a share. Net profit in the nine months ended Sept. 30 was $38,832 or 7 cents a share, compared with $437,756 or 87 cents a share in the first nine months of 1927.

Canfield Oil Co.—All but four of the 9400 shares of Canfield stock recently offered stockholders were subscribed for, it was announced at the annual meeting. Stockholders had been given rights to subscribe for 10 per cent additional stock at $100 a share. A stock dividend of 10 per cent was paid recently. The common stock has sold lately as high as $190 a share. The regular dividend of $7 a share has been declared on the increased capitalization.

Union Oil Co. of California—Employes who bought stock under the company's plan of July 15, 1925, may subscribe to additional stock under the subscription rights given all stockholders of Dec. 28 record. The rights expire Feb. 15. The price of the stock which is offered one share for 10 held is $35 a share.

Shell Union Oil Corp.—Three million additional no par shares have been listed on the New York Stock Exchange.

Warner-Quinlan Co.—Directors have proposed an increase in the capital stock from 500,000 to 1,000,000 no par common shares.

British Controlled Oil Fields, Ltd.—In year ended July 31, 1928, this British company, which operates in Venezuela, had a gross profit of £405,280 and a net profit of £169,472. The preceding year its net was £186,389.

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